THE GENESEE FARMER

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CONGRESS AND AGRICULTURE.

Congress has recently adjourned, after a session of nine months; and as agriculture gives employment to two-thirds of the capital and labor of the country, it may not be amiss to inquire how much time and attention the national legislature bestowed on this most important interest. Did it give a month, a week, a day, an hour, or a minute, to the consideration of any measure designed to promote either tillage or husbandry? Being in Washington, and having a watchful eye over the farming interest, so far as it might be affected by Congressional legislation, we are able to speak understandingly on this subject. Agriculture had a few friends in both houses, but the enemies of the cause were too powerful for them to accomplish anything whatever in behalf of improvement. This failure, however, does not lessen our obligation to acknowledge in the most public manner the labors of such as tried to realize a more auspicious result. To make more friends in Congress, we must do full justice to those that serve the cause faithfully, whether they fail or succeed. Among these, we place Mr. Eben Newton, of Ohio, in the front rank. Watchful, industrious, and persevering, while neglecting no other duty, he presented the paramount claims of agriculture to the attention of Congress in a manner so clear and convincing, that had the bill creating a Bureau been allowed to reach a direct vote, with the ayes and nays, we doubt not it would have passed the House of Representatives; but the committee on agriculture were not allowed by the majority even to report a bill in nine months, the chairman (Mr. Floyd, of New York,) being opposed to all legislation for the benefit of the farming interest, as recommended by the President in his message. Gov. Doty, of Wisconsin, was a member of that important committee, and did a yeoman's service in the cause of agriculture. To the intelligent farmers of the northwest we say, be careful to sustain this able and reliable friend of your cause. Stand by your friends, and let your enemies take care of themselves.

Of the New York delegation, we have found Mr. L. Burrows, of Orleans county, always reliable during the three years that we have known him at the federal metropolis. Without making speeches, Mr. B. is one of the most upright, influential, and useful members in the popular branch of Congress. Mr. Horsford, of Livingston, who is a practical farmer, illustrated the wisdom of sending this class of men to legislate for a nation of farmers. As the latter grow in knowledge, they will be represented by fewer lawyers and more cultivators of the soil, at Washington. Mr. Wallbridge, of Tompkins, and Mr. Ives, of Jefferson county, are also farmers, and most useful and faithful representatives. Sometimes we meet a narrow-minded, do-nothing farmer in Congress, but he is a *rara avis*. Among those who were ready to work for the benefit of agriculture, the name of A. P. Hascall, of Genesee county, should not be omitted. Straight forward working men, and no other, should be sent to Congress. By all

means, let the drones remain at home, for their unworthy examples do a deal of mischief in any legislative body. Idleness, drunkenness, fighting, and blackguardism work badly with grave and peaceful legislation. In no other place is a thorough reform so much needed as at the capital of the United States. If it were possible for the people to see all that their public servants do in Washington, many a popular man would be ruined. But so long as the people are kept in ignorance of vices the most demoralizing, and of public duties uniformly neglected, neither agriculture nor any other great industrial interest will be properly attended to. The patronage of Congress and the Departments is too important to the journals of the metropolis for them to expose the shortcomings of the men that hold the strings of the public purse. Restraints more potent and salutary are greatly needed; but it is not so easy to determine from what sources they are to come. More care ought to be excercised in selecting delegates. The disposition of fifty millions a year presents numerous and powerful temptations to favoritism, fraud, and downright robbery of the treasury. One reason why nothing is done for agriculture, is that Congress has too much money to dispose of at each session. Rural sciences, and the advancement of tillage and husbandry, stand no chance in a general scramble for indefinite millions of plunder.

"THEORIES EXAMINED AND EXPLAINED."

Such is the comprehensive heading of a series of articles which Mr. Levi Bartlett, of Warren, N. H., is writing for the *Boston Journal of Agriculture*. Hitherto three letters have appeared, all more or less directed against those who doubt the correctness of the so-called "mineral manure theory." Number two is an examination and explanation of Mr. Lawes' experiments and results on wheat culture, which have been published in full detail in the *Journal of the Royal Agricultural Society of England*. It is exceedingly unfortunate for the cause of truth and the advancement of agricultural improvement, that neither Liebig nor Mr. B. appear to have read the pamphlets written by Mr. Lawes himself, but have taken up their able pens to refute what they obtained only at second hand. Mr. B. confines himself to a few facts respecting Mr. Lawes' experiments, which we mentioned in the June number of the present volume of the *Genesee Farmer*, when speaking of the benefits derived from plowing in green crops as manure; and upon these few facts, quoted for a special purpose, Mr. B. forms his opinion respecting the whole of Mr. Lawes' experiments, and says:

"I presume there can be no doubt of the correctness of the experiments made by Mr. Lawes, neither of the results or conclusions to which he arrived, as regarded the particular soil upon which he experimented. To my mind, the result of his seven years' labors does not establish any general principle in agriculture, that can be safely followed, or practically be relied upon; neither does it in any way determine the value or use of applying any of the salts of ammonia to the wheat crop, on other kinds of soil, nor does it depreciate the well known utility of manuring other soils with potash, soda, sulphate of magnesia, calcined bones, &c., or settle any other relative question,* only so far as regards the *particular soil* on which he experimented, and others of *precisely* the same *mineral* and *organic* composition."

This is rather a severe judgment respecting the value of experiments which have cost at least *one hundred thousand dollars*, and been made by scientific gentlemen of acknowledged capability and accuracy. Dr. Gilbert has given his entire time to the experiments for nine years; and we presume that even Mr. B. will admit that he is a gentleman every way competent to make experiments that shall lead to the elucidation of great and fixed agricultural principles, inasmuch as he has spent considerable time in the best continental and British laboratories, and received the degree of Doctor of Philosophy from the great Liebig himself. Our own opinion is, that he is the most care-

ful, reliable, and best agricultural chemist in Great Britain — one who prefers to investigate the laws of nature in the field and laboratory, rather than to obtain an ephemeral popularity by writing series of gassy articles on subjects about which he has nothing new to say. If such a series of experiments as these gentlemen have made do not amount to anything, they and all other experimentalists had better quit the business, and go to work with the pen and examine and explain, *deductively*, the various theories now agitating the agricultural community. They would in this way build up a system of agriculture that would rest on an impregnable fortress — so long as experiments were held as showing nothing.

Mr. B. said he made the above statement advisedly, and promised in a future number to bring forward facts and experiments as much entitled to credence as Mr. LAWES'. We should have replied to this article sooner, but waited to see the facts promised; but in the September number of the *Journal of Agriculture*, there is another article devoted to Mr. LAWES, *but not a single fact or experiment brought forward that supports the mineral theory*, or is adverse to the theory Mr. B. is endeavoring to explain away.

Mr. B. cites JOHNSTON and NORTON, to show that nitric acid and ammonia are formed in the atmosphere; and that when lime, potash, soda, &c., are applied to the soil, nitric acid is obtained, which is equally valuable as ammonia for supplying nitrogen to plants; (?) and asks:

"Is it possible there was no nitrate of potash or soda formed from nitric acid derived from the atmosphere during the seven years course of culture, when potash and soda were so liberally supplied to the soil? Again, it is said, and pretty generally believed, that sulphate of lime (gypsum) will fix a portion of the ammonia that falls in the rains. Would not the sulphate of magnesia, (which Mr. LAWS so liberally applied to some plots of his field,) fix the ammonia of rain water, as readily as gypsum? An imperial gallon of water, at the ordinary temperature, will dissolve only about four ounces of gypsum; while the same amount of water will dissolve four pounds of sulphate of magnesia. But what is still more singular, in several instances he applied 150 lbs. of sulphuric acid, one of the most efficient agents for decomposing carbonate of ammonia, and changing it to a sulphate, one of the two compounds of ammonia, that had such a wonderful effect in doubling his crop of wheat — was there no sulphate of ammonia added to the soil during the seven years trial — from the ammonia of rain and snow water? If there was, why should not this naturally-formed sulphate have had some beneficial effect, as well as that artificially applied? To my view, some of these things are inexplicable."

The 150 lbs. sulphuric acid was not applied in any instance in the free state, but combined with 200 lbs. calcined bone dust — thus forming the soluable article superphosphate of lime, at present so much recommended by certain parties as a manure for the wheat crop.

"Was there no sulphate of ammonia added to the soil, during the seven years' trial, from the ammonia of snow and rain water?" We answer, there was — sufficient to grow from 15 to 23 bushels, varying as less or more rain fell during the growing season, and thus supplied less or more ammonia to the plants. Mr. B. starts with the assumption that the atmosphere is capable of supplying an unlimited quantity of ammonia to the soil, providing the proper means are used to attract and fix it; and therefore the fact that sulphate of lime and sulphate of magnesia, "said and generally believed to be capable of fixing the ammonia of rain water," did not increase the crop, while ammonia artificially supplied did greatly increase it, is "inexplicable." Precisely it is, if the assumption is correct; but where is the proof of it. We think—not because "it is said and generally believed," but because experiments show it — that a *good wheat soil*, if properly drained and tilled, so that the water can percolate through it, will retain all the ammonia brought to it by rain and snow water; and therefore the addition of the supposed fixers, gypsum and epsom-salts, would not increase the supply of sulphate of ammonia available for the plants. We know that the amount of ammonia brought to an acre of land each year, by rain and snow, is much more than a crop of wheat ever contains; but where is the evidence that in the growth of the plant there is not a destruction of ammonia. Mr. LAWES contends that there is such a destruction, and

demonstrated it by his experiments — that, in fact, for every pound of ammonia organized in the wheat plant, there is at least five pounds of ammonia used by the plant in the performance of its functions. Mr. LAWES did not clearly perceive how and for what purpose this destruction took place, but was nevertheless convinced of the fact. Recently the experiments of Prof. WAY render it exceedingly probable that ammonia is used as the solvent and vehicle for carrying silicic acid to the plant, and *evaporating* when the silica is deposited, just as water is known to do in depositing the elements of plants. Chemists have always had a difficulty in accounting for the manner in which silica was conveyed to the plant, the theory being that it was as a soluble salt of potash or soda, and the patent of Prof. LIEBIG was for manufacturing this soluble silicate of potash, &c.; but from the fact that this patented manure has failed to increase the wheat crop, not only in England, but in Germany, under the immediate superintendence of LIEBIG himself, it is more than probable that silica is not taken up as a silicate of potash. Admit the opinion of Prof. WAY, and we can account for the benefit of summer-fallow on heavy soils — for the manner in which silica is deposited — and for the fact that in the growth of wheat there is an immense destruction of ammonia, as there would also be in the growth of all the cereals and other plants containing a large per centage of silica.

Will Mr. B. examine and explain this theory, not from what we say about it, but from the article itself, published in the last *Journal of the Royal Agricultural Society of England?*

In number three, of the series of letters, we have repeated assertions, but none of the promised experiments or facts. Mr. B. says: "At the first glance, some might be led to infer from the result of Mr. LAWS' statements, (and there can be no doubt of their correctness,) that the only thing needful for growing good crops of wheat, was *ammonia*, in one form or another." Mr. LAWES most certainly never made any such "statement" — but, as we have said before, Mr. B. does not know what Mr. LAWES has said, as he evidently has not read his articles, is ignorant of the bearing of the subject in England, and does not even know how to spell his name correctly. As our article on plowing in green crops appears to be the source of Mr. B.'s information, why does he not attempt to refute the position there maintained by us, and not attack Mr. LAWES. We never said, any more than Mr. L., that the only thing needful to grow good crops of wheat, was ammonia. We say that every mineral which enters into the construction of the plant, must be in the soil in sufficient quantity, and in an assimilable form; and that if *any one is absent, the plant will not grow at all;* if any one is deficient, there will be a deficient crop: and this, though there is a liberal supply of ammonia. But that, though there is an abundance of every inorganic constituent present in the soil, and in an available condition, yet there will not be sufficient ammonia supplied from the atmosphere to produce over an average of 17 bushels of wheat per acre; and that if we wish for an increase over this amount, ammonia must be supplied artificially.

We do not deny that there are some soils so rich in organic matter that an addition of ammonia would be worse than useless, and that on such soils mineral manures will be of great benefit; but as a general thing, on most of our soils cultivated with wheat, ammonia (on account of the destruction we have mentioned as taking place) is much sooner exhausted than even phosphoric acid, which we hold to be the first *mineral element* exhausted. We believe there is no better wheat-growing district in the United States than Western New York; yet even here we do not average more than the annual yield of wheat on the continuously unmanured acre in Mr. LAWES' experiments. Why? Is it because the minerals are deficient in the soil? If so, why is it that we can, without supplying any, still continue to grow wheat? Why is it, too, that we can obtain such splendid crops of clover, which contain precisely the same elements, and in larger quantity than the wheat crop, excepting the single element silica, or sand. But of this no one for a moment supposes our soils are deficient. How is it, too, that plow-

ing under a crop of clover benefits the wheat crop? No addition of minerals are supplied to the soil, and yet the wheat crop is greatly increased. The answer is simple and obvious — our wheat fields need a more liberal supply of ammonia, which the clover supplies.

If our wheat fields needed nothing else than the ash constituents of wheat, to keep them in a high state of fertility, and if there was no destruction of ammonia in the growth of cereals, wheat-raising on such scientific principles would be attended with much larger profits than most farmers obtain at present; and all who believe such a doctrine, should, to be consistent, rush into the business, and make their fortune by high farming. A crop of wheat of 40 bushels per acre, would take from the soil in the grain about 40 lbs. of ash. The constituents of this ash can be returned to the soil in wood ashes, salt, and animal charcoal, for less than *one dollar;* so that all we have to do to keep land yielding 40 bushels of wheat per acre, is to apply about a dollar's worth of mineral ingredients. If such a doctrine is true, *high farming* would be the most profitable business in the world. But this is not the case; and it is the necessity for, and high price of *ammonia*, that renders the production of large crops of wheat, at the present relative prices of ammonia and wheat, of doubtful economy. Are we wrong, then, in urging on our readers the importance of accumulating ammonia in every possible way on their farms, as being the only known way of increasing the average yield of wheat, corn, &c., &c. We place ammonia most prominent, because of all fertilizers it is most necessary; and we know of no way of accumulating ammonia on the farm, without at the same time increasing the indispensable inorganic constituents of plants.

BUTTER AND CHEESE MAKING.

In the May number, page 143, we gave an article on this subject, which has called forth a letter from a correspondent of the *Ohio Farmer*, in which the writer says he differs in a few things from the opinions stated in our article.

First, it is his opinion that the cause of rennet curdling milk, is the gastric juice it contains, and not, as we stated, to the addition of a *soluble highly nitrogenous ferment*, such as is formed by the *aremacausis*, or transformation of the stomach of animals during the process of making rennet.

We will admit that gastric juice is generally supposed to be the efficient agent of rennet, and that milk is immediately curdled in the stomach of animals — as every one who has been blessed with a babe must have observed — and that the stomach of animals makes better rennet than any other substance. Milk will curdle without the addition of any substance, merely by the transformation of its "sugar of milk" into lactic acid, which invariably takes place at the proper fermenting temperature, and in the presence of a nitrogenous substance, such as casein or curd. The addition of any animal membrane or meat, will accelerate this transformation or curdling of milk. Many vegetable substances will also do the same. The Jews, who were forbidden by the Mosaic law to mix meat with milk, make their cheeses with Ladies' Bed-straw, (*Galium verum.*) In some parts of Holland, muriatic acid is used as rennet. If gastric juice is acid at all, which is somewhat doubtful, it most certainly is a very weak acid; and therefore, if it is the acid of gastric juice that is the efficient agent, large quantities would be required to neutralize the soda of milk, and precipitate the curd. But in rennet, as commonly used, there could not possibly be but a very small amount of gastric juice left. If, too, rennet acted from the acid of gastric juice, its effect would be instantaneous, or at least the precipitation of the curd would be much quicker than it is found to be in practice. Our critic offers no reasons for his opinion, we have therefore none to refute; neither does he offer any evidence against the correctness of the one we advocate.

His other objection is, that we recommend the milk to be raised to too high a temperature (95 deg. Fahr.) at the time of adding the rennet. He thinks 85 to 90 deg. the proper heat.

We know that the colder a cheese is "set," the sweeter, softer, and tenderer it will be, and have a rich buttery appearance; but at the same time there is danger of having it too cold—the curd is not all obtained from the milk, and it is very difficult to get all the whey out of the cheese, whereby it is much injured and often spoiled. We dislike a tough, dry, hard, white cheese, as much as any one, and therefore would not advise our readers to put the cheese together too warm; at the same time, we do not like a cheese that cuts like butter, and lacks that sharp, dry, cheese taste, so much sought after by good judges—such as a cheese would be if put together too cool. It is, however, possible that we have given the temperature for setting milk rather too high, and that 90 deg. would be the best average temperature. At the recent New York State Fair, where there was a splendid exhibition of cheese, we conversed with several exhibitors in respect to the process of cheese making. The temperature at which they set the milk, ranged from 85 to 96 deg. One large maker, from Herkimer county, said he did not use a thermometer, and always judged by his hand, endeavoring to get it about blood heat, (98 deg. Fahr.)—setting it a little warmer in spring and fall, than during the hot months. The celebrated Cheshire cheese is set from 90 to 100 deg., the desired temperature being 95 deg. As a general thing, the poorer the milk is in butter, the colder should it be set together; otherwise the cheese will be hard and tough.

We are glad to have our articles commented on by our readers, even in contemporary papers, hoping that truth will be drawn out, and the cause of agriculture advanced by discussion. Cheese is at present, and will continue to be, one of our great agricultural products. We wrote the article in May, for the purpose of inducing farmers to make more cheese, and hoping to throw a little additional light on the chemical and practical process of cheese making, that would not be useless even to those who have been years in the business.

DROUTH AND DEEP TILLAGE.

The depth to which the roots of wheat, corn, clover, &c., penetrate the earth, under favorable circumstances, is much greater than is generally supposed. We have seen roots of wheat, under ordinary cultivation, that were upwards of nine feet long; and it is supposed that clover roots descend lower than wheat, though on what evidence we know not. The value of deep plowing and thorough pulverization of the soil, is now beginning to be more generally *seen*, and accordingly believed in.

There are some soils on which deep plowing would, for the first few years after the operation, prove injurious; yet in the end, under the meliorating effect of the atmosphere, the advantage of such plowing and working would be most decided. Subsoil plowing, or merely breaking and loosening the subsoil without bringing it to the surface or mixing it with surface soil, can not prove injurious on any soil, though it may the first and second year cause it to throw up a most unusual quantity of weeds, instances of which we have ourselves experienced.

We do not think it is necessary or advisable to plow deep for every crop—one good deep plowing once in four or five years being all that is required. Especially is this true where manure is applied pretty freely, and crops are grown which require most manure during the early stages of their growth.

It is rather a difficult matter to get some farmers to believe that in a very dry summer, land that is well underdrained and subsoiled. so that all water shall drain off quickly, is really wetter, or is capable of supplying more water to the growing plants,

than a similar soil undrained or shallow plowed. It is nevertheless a fact; and more and more are convinced of it each year, as they see the good effects produced. And as we believe that all which is necessary to cause a farmer to change his mode of culture, is to convince him he is in error, and to show him a better way for him to adopt, we think there can be no doubt that the next twenty years will witness a great change in our system of agriculture, and under-draining and deep plowing will be the foundation of the much needed improvement.

We have been led to these remarks, by reading an article in the *Rural New Yorker* of September 9, from the pen of LINUS CONE, Esq., of Troy, Oakland county, Mich., in which, after saying that the crops have been most seriously injured by drouth this season, he gives the following most important and interesting statement:

"As an instance to show what deep cultivation will do in time of severe drouth, I will mention a field of about six and a half acres, mostly high, dry, undulating, clayey land, which has been in grain most of the time since it was cleared—over twenty years. Five years since, it was manured with about thirty loads of coarse barn-yard manure to the acre, and planted to corn for two seasons, then barley and oats one season, wheat next, and seeded with eight or ten bushels of clover chaff and six quarts of timothy to the acre. For the barley and wheat crops it was subsoiled and made fine and mellow to the depth of twenty inches. This season it was in meadow, and a heavier growth of grass I never saw; thirty-three loads of hay were taken from it, and since it was cut the pasture has been fresh and good. Here was probably over three tons of hay per acre, while on other land in this vicinity, of similar soil, but which had been subjected to shallow tillage, the grass was light—in many cases hardly worth cutting.

"I might mention other instances to show the beneficial effect that deep cultivation has upon growing crops, but it is not necessary—it would not probably do any good even if such a statement should be made to every farmer in our land. It is so much easier to grumble about the weather than it is to put in the plow, that nearly all prefer the latter course."

The fall is the most convenient time for subsoil plowing and underdraining.

THE IMPROVEMENT OF OUR COMMON SHEEP.

IN the improvement of sheep, as well as of other animals, the *male* is considered of more importance that the female, and more care is therefore necessary in selecting one; yet, for the production of perfect animals, it is absolutely essential that both male and female be well-bred; and if not individually perfect in every point, the conformation of the *two* should be such as when combined would form a perfect creature. So that, in endeavoring to improve our common flocks of sheep, we should not only get good, first rate bucks, but should select out from the flock the ewes of the best age and make, to put with him; and in choosing them, should have an eye to those particular points we wish to have well developed in the lambs. In this way much may be done to improve our ordinary breeds of sheep, without much outlay in purchasing improved stock. A knowledge of the principles of breeding, and care in the selection and management of the ewes from which we intend to breed, and the choice of a buck adapted to counteract any deficiencies in the ewes, will, if judiciously persevered in for a few years, greatly improve any flock of sheep.

Farmers often procure a buck which, however useful he might be for other flocks, is altogether unsuitable for the flock he is intended to serve. Again, in a large flock of ordinary sheep there are often two or more kinds of ewes with characteristics entirely different from each other: hence a buck that might be first rate for the one, and calculated to improve the breed, would be altogether ill adapted for the other, and would propagate imperfections rather than neutralize them; yet how common is it to let the whole flock run together, and have the indiscriminate use of the same bucks. Instead of this careless, heedless, and profitless way of breeding, the flock should at this time be

judiciously assorted into lots of forty or fifty, having a buck with each lot possessing strongly the particular points in which the ewes are somewhat deficient, and in accordance with the object for which the lambs are raised. Where a small flock is kept, and only one buck is needed, a farmer can often select out some ewes of a particular conformation, that would be better served by a neighbor's buck than his own. The neighbor, too, may be in the same circumstances; and thus a change of ewes to be served by each other's buck would be mutually advantageous to the owners and beneficial to the flock.

The best time at which to place the bucks with the flock, depends a great deal on the breed of sheep and the object of the breeder. If his flock is rather coarse wooled, and he wishes early lambs for the butcher, the middle of September is perhaps not too soon. This, as ewes go twenty-two to twenty-three weeks, would bring the lambs about the first of March, which in the vicinity of large cities, where early lamb commands a good price, is the best time—yielding most profit, although a little extra care and feed are necessary. The buck in this case should be a Leicester or South Down, as their cross with common sheep gives a larger lamb, with increased tendency to fatten and early maturity. Such a cross with our common half-blooded Merino flocks produces good mutton sheep, and it is often profitable to adopt it for that purpose; but it would be folly to attempt to *breed* from such a mongrel race. We are not sure, however, but a good South Down ram would improve the size and constitution of some of our common flocks, without materially injuring the weight and quality of the wool. If, however, the object of the flock-master be merely the production of wool of fine quality, he should procure Spanish or French Merino bucks, selecting from his flock the best ewes of from three to eight years old to place with them. It is not desirable to have the lambs come till there is a prospect of grass for the mother; so the bucks should be kept from the flock till the latter part of October. And as grass is often scarce and innutritious then, it will be advisable to give a little clover hay, or perhaps oats or peas, to stimulate the ewes at that time. The buck, too, should be grained, or have a little oilcake at night, separately from the ewes. Nothing pays better than careful attention to the flock during winter; and towards spring the quality of their food should be increased, and a few ruta baga or mangel wurzel may be given with advantage.—Especially are they beneficial when the ewes are heavy in lamb, or after lambing, if grass is not ready. It is not, however, desirable to have the breeding ewes too fat; but we are sorry to say this is a caution too little needed—more flocks being injured by scant and non-nutritious food, than by over feeding.

To Reduce Solid Feet to Bushels.—The publication, in your August number, without comment, of an article giving a rule "to reduce solid feet to bushels," though perhaps correct in Indiana, where it appears to have been written, and though sufficiently accurate for ordinary purposes, is very likely to give wrong impressions of the contents of the bushel in this State. By the statute of New York, the bushel bears the same proportion to the cubic foot, that 80 does to $62\frac{1}{2}$. Therefore, as $62\frac{1}{2}$: 1728 inches :: 80 : $2211\frac{24}{100}$ inches, the content of the bushel—making a difference of $61\frac{24}{100}$ inches between the bushel of your correspondent and that established by our statute. A rule to reduce solid feet to bushels, applicable to this standard, is to multiply the number of solid feet by 25, and divide the product by 32; the quotient will be the number of bushels. A solid foot is $\frac{1}{32}$ of a bushel. The crib or box containing 64 feet, mentioned in the "example" of your correspondent, contains according to the above standard, exactly 50 bushels. A. F. H.—*Kingsbury, N. Y.*

We are happy to publish this correction of our correspondent, which is the true rule for calculating the size of the imperial bushel, now adopted as the standard. The rule previously given was correct in regard to the "Winchester bushel," now no longer in use.

WINE-MAKING.

BY C. BLAKELY, OF ROXBURY, CONN.

In the last January number of the *Farmer* may be found some important information on the subject of making wine, together with some remarks of my own on the culture of the vine, to which, as the subject as it has been presented in your paper is by no means exhausted, I would beg leave to append a few hints for the special benefit of those of your readers who may wish to try the experiment, as many of them might easily do, of making wine on a small scale.

The manufacture of wine is, to a very great extent, a thing of mere fancy or *taste*. Few branches of business are more completely under the control of the operator, or subject to greater modifications. There are so many ways in which wine may be adulterated, and the facilities for making good imitations of the pure article without employing a single drop of grape juice are so numerous, that it is difficult for most persons to distinguish the spurious from the pure. It may be made strong or weak, and may be colored, aromatized, or flavored, to suit the fancy. This constitutes an important reason why it should be produced in every section of the country, by persons of reliability, and to an extent commensurate with the legitimate uses to which it may be applied. And why should it not be? Why purchase an article for medicinal or sacramental uses, the appropriateness of which for the purposes for which it is intended we know nothing about? Why not make for ourselves the very article we want? I propose to notice first—

The time of gathering the grapes.—There is an appropriate time for this. If too green, they will be wanting in richness, and in that peculiar *ripe*, spicy flavor, which is essential to good wine. Again, when they become too ripe, so as to be shriveled, it is a sign that much of the juice, and the gaseous aroma along with it, have made their escape by evaporation, and that the fruit is tending to decay—a state which is unsuited for making lively, delicious wine. The best time for harvesting, is when they have arrived at maturity of color and size, and before there is any tendency to decay.

To cleanse the cask.—The condition of the cask, jug, or bottle, designed for containing wine, can not be too carefully attended to. It should be free from anything like sediment, or mold adhering to the interior, the condition of which may be readily known by suspending a lighted candle by a wire within the cask. When must or acid has become fixed in the cask, it is very difficult removing either of them. A little unslaked lime dropped within the cask, with boiling water applied, so as to cause rapid ebulition, is a good thing. Water that is freely impregnated with alkaline salt, or the lye of wood ashes, is an excellent thing; also, the fumes of sulphur are used.

Fermentation.—Previous to fermentation, wine is called *must*, or *stum*. That which has been once dead and has been re-animated by means of extraneous additions, is called *stummed* wine. In the January number of your paper there are *two* fermentations spoken of, as taken from the *Review*, previous to the usual time of bottling. This is not technically correct. The second fermentation there alluded to, is but the resumption or continuation of the first, which had been retarded or suspended by the intervening cold weather. The *season* of the year, irrespective of heat or cold, has no influence on fermentation. There are three kinds of fermentation: First, the *vinous*, producing alcohol or spirit, and giving to the liquor its peculiar stimulating and preserving qualities; second, the *acetous*, converting it into vinegar; and third, the *putrid*, destroying its vitality, and changing it into a nauseous, poisonous liquid.

When to bottle wine.—This depends on a variety of circumstances, one of which may be the legitimate offspring of another. It may be changed into vinegar in a few hours, by a process well understood by manufacturers of that article, or it may be kept for ages in its original, unfermented state, according to the treatment it may receive.

Artificial heat is sometimes employed to keep up fermentation during the winter, and fit the wine for an early market; but a temperate situation, and a gradual change from a new to the vinous state, is esteemed preferable for making good wine. For the time of bottling, see *Methods of making Wine*, hereunto appended. When the cork is driven in, which should be done with the flat side of a wooden bat, the bottle should be turned upon its side, that the liquor, and consequently the entire bottle, may resist the pressure, otherwise it will be liable to break. They should also remain on their sides, that the cork may be kept swollen, and all communication from without prevented. Atmospheric air should be excluded both from casks and bottles, and no cask but partially filled should be allowed to retain it for any considerable length of time. The influence of air, where allowed free access, will be to extract the vitality of the wine, its aroma and alcohol, and eventually to induce putrid fermentation. Besides, a scum will usually form over the surface in partially filled casks, which in time will be converted into a bitter mold, especially around the outer edge, and you have then only to shake or move the cask in order to impart a disagreeable flavor to its entire contents.

The alcoholic properties of wine.—On this head I wish to speak, inasmuch as many persons, though well informed on other subjects, entertain entirely erroneous opinions in regard to this. I have before me a copy of the *New York Evangelist*, an ably conducted religious journal, containing a highly commendatory notice of certain wines, *because* they are said to be "made without alcoholic additions." Similar notices are often contained in other papers; and the inference on the part of many minds is, that it is *free* from alcohol. This, much as it is to be desired, is an impossibility! That which we technically call wine, can be preserved at a temperature of 33 deg., for then no fermentation can take place; but not in the ordinary way; nor can it even be *made* without alcohol, which is entirely the result, not of *distillation*, but of *fermentation*. The distillation of any liquid can not create a particle of alcohol; it is merely the process of separating it from the mass. When we can contrive a way to make wine without the use of sugar, either of grape or cane, which enters largely into the composition of almost every vegetable, and without fermentation or evolving carbonic acid; then, and not till then, may we have wine without alcohol. I can not see that pure brandy, the product of wine by distillation, is seriously objectionable as a preserving ingredient; but as its purity can not generally be relied on, the use of sugar of cane, which is plenty and cheap, will generally afford satisfaction. As to the per centage of alcohol necessarily employed in the preservation of wine, there seems to be no settled rule. I give below the results of several analytical experiments upon different kinds of wine, as found in *Brande's Chemistry*, New York edition, 1821, at page 521. Seven kinds of port wine analyzed, gave results differing in strength from 19.00 to 25.83 per cent. of alcohol, which I suppose is equivalent in strength to about 38 to 51 per cent. of common brandy. Other experiments upon wines in which brandy could not have been used without destroying their identity, gave from 11.3 to 16.6 per cent. of alcohol, the highest figures indicating the strength of about 33 per cent. of common brandy. What per centage of alcohol any given quantity of sugar will yield as compared with a given quantity of brandy in the same kind of wine, I am not able to say. Will not some one inform us?

For some other valuable hints, I would refer your readers to the April number of the *Farmer*, page 117. I give below three methods of making wine, as practiced in making on a small scale.

First method.—Mix equal parts of mashed grape and water together, and let the whole remain a week without stirring; a less time will do if the weather should be unusually warm. At the end of that time, draw off the liquor and put to each gallon three pounds of sugar. Let it ferment in a temperate situation. When fermented, stop it up tight; and in about six months it will be fit to bottle.

Second method.—Put into a bottle about one-third the quantity of water that you

intend to add of grapes, and heat it as long as the hand can well endure; then put in the grapes, which will become so softened by the warm water that they may be easily mashed by the hand, and when mashed the liquor in this diluted state may be easily separated from the skins and seeds by passing it through a cullender. To each gallon of this liquor add three pounds of sugar; stir it till it dissolves; let it work as before, and bottle when it is fit, which may be in six months or a year.

The above rules will answer very well for grapes that are pulpy, having a thick coat of flesh adhering to the inner surface of the rind.

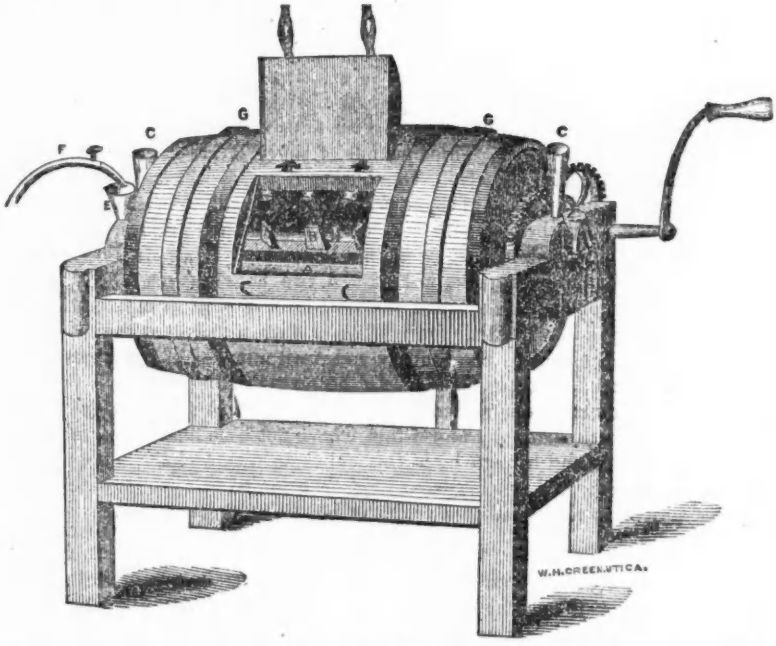
Third method.—Wash the fruit in any way you can do it most easily, and if the quantity is small, strain or squeeze the juice through a cloth strainer. This will be rather difficult if the fruit is pulpy, as the pulp will prevent the juice from percolating through. By letting it stand a day or so, it will separate more easily. Add to the juice, when extracted, from two to three pounds of sugar per gallon, according to the quality of the grape, the length of time you wish to preserve it, and the temperature at which it is intended to be kept. Three pounds of sugar is about as much as a gallon of Catawba juice will readily dissolve. One bushel of grapes will make three gallons of juice, and two and a half pounds of sugar per gallon will add to its volume about one gallon to every ten. The best of wine is made by this method; and in all cases where a superior article is intended, loaf sugar should be used. I think Mr. LONGWORTH disapproves of sugar for Catawba juice, but after a two hour's search for his paper I am unable to lay hands on it. If designed for use within a year, it may need but little extraneous to preserve it. The time for bottling, is when it arrives at the most desirable state of which it is attainable. See January and April numbers of this paper.

I present these *crude* remarks as the *fruit* however of some attention on my part, being aware that you and your readers may not exactly *relish* my *gleanings* on account of their extent, and *expressing* my regret that I have not been able to *squeeze* them into a more compact form, and to *treat* both you and them with a *richer*, more *refined*, and more *thoroughly elaborated* article; but I hope that no one will get into such a *ferment*, as to cause a violent *racking* either of brains or bowels on account of it.

THE ADVANTAGE OF CUTTING CORN EARLY.—It is generally admitted that the grain of corn suffers little, if any, by cutting before fully ripe—that little nourishment is derived through the roots, during the maturing process, but that the grain obtains its food from the stalks and cobs; so that the grain is as heavy and the yield as great if cut up early and allowed to stand in the field till ripe, as if left growing till the stalks are dried up. In many districts, cornstalks form the principal winter feed for sheep and cattle; and these are often greatly reduced in value, by allowing the corn to remain uncut too late in the fall, when early frosts are frequent, and which greatly injure the nutritive qualities of the stalks as well as render them much more unpalatable to stock. After the corn is cut up, however, *frost does not injure the stalks*, as the circulation of sap, &c., is then stopped. It is nevertheless advisable to gather in the stalks as expeditiously as possible after husking, for fear of bad weather; and now that fodder is likely to be so scarce, it will be good economy to be at a little extra expense in hurrying the husking and the gathering in of the stalks. Stalks do better in stacks, if well built and covered, than they do in a close barn, where very little air can circulate through them. We would recommend scattering a peck of coarse salt to each load, when stacking the stalks; it imparts a taste to the fodder, which makes the stock eat it with much greater relish. From the effect salt has in retarding fermentation, stalks will bear to be harvested in a much greener or moister state, if salted as recommended, than when salt is not used. Carefully husband everything that will be useful as food for cattle; for in most places we shall greatly need it the coming winter.

THE EXCELSIOR CHURN.

We have received from the patentee, G. B. Clark, of Leonardsville, Madison county, N. Y., an engraving and description of a new churn, called the *Excelsior*. We give Mr. C.'s description, and for price, &c., the reader is referred to our advertising pages. We have never seen this churn in operation, and therefore can not speak personally of its merits, but we have seen statements from dairymen who have used them, and who speak very favorably of their operation.



"A is the rotating or revolving body, worked by crank and gearing, as shown, or it may be attached to any motive power by passing a band directly on to its raised hoops G G. Two or more large churns can thus be driven in one frame, by passing a short band from the first cylinder to the second, and from that to a third, &c., thus affording facilities for churning any quantity of milk and cream, together or separately, at one operation. By a new and simple device, the body is easily made water tight at its lid and bearings on the fixed or permanent axles. The cross bar, or dash, is a narrow wooden bar, placed longitudinally above the center of the barrel or body, with projections (B) on its upper edge, extending upward to the periphery, at any desired angle. Pins inserted in two side staves of the cylinder, pass between the projections on the cross bar, which is removably attached, or supported by iron braces, to the axles on which the body rotates or revolves. The axles are hollow, with ventilating funnels C C, set in blocks, and extending downward into their cavities. By closing the outward end of the axles, a perfect ventilation of the cylinder is effected, even when filled above the place of its axis. The cavities of the axles permit the crooked water tubes E E to be passed through them, to be inserted in the corked ends of the small metallic cylinder in the center of the churn. Through these tubes, which close by their flanges the outward end of the axles, and being of less diameter than the cavities, so as not to obstruct the ventilation, a stream of cold water can be kept running, the water passing down the outward injecting funnel through the tube, filling the tempering cylinder, (the small tube on the cylinder should be corked after the air has escaped,) and passing out at the waste pipe. This need only be used when tempering is necessary; and where running water can not be applied, a few pails from the well will reduce the temperature sufficiently. A thermometer may be used to ascertain the temperature of the water at the waste pipe, which will indicate correctly that of the milk or cream. The cross bar, tempering cylinder, and tubes, can all be removed from the barrel of the churn, thus leaving nothing but the empty cylinder for cleansing."

Condensed Correspondence.

Weight of Leicester Lambs.—I saw an article in the August number of the *Farmer*, relative to good sized lambs, which induced me to present you with the following. I also have some weighty lambs, without extra keep. One (from a yearling ewe) four months and one week old, weighs 85 lbs. Also, one which on the morning after birth weighed 14 lbs.; when four weeks old, 75 lbs.; and now, (August 26,) four months old, weighs 116 lbs. Can you beat this? They are of the Leicester breed. James M. Quale.—*Middlebury, Wyoming Co., N. Y.*

To Kill Crows.—In the winter, or towards spring, the crows are generally very plentiful. Take the entrails of hogs or sheep, or a dead carcass of any kind, and place it at a proper distance behind the barn, or other out-building. Then take a two inch augur and bore a hole through some convenient spot, the proper height, and remain inside after they frequent it. Then take a good fowling-piece, well loaded, and when the black gents assemble to dine, point the muzzle of your gun through the port-hole, take a dead level at the thickest part of the assembly, and let go, and the carnage will be desperate. This is no theory; it is practical experience. I think nothing of killing twenty at four shots with a small gun. I have often done it, and had crows in the spring by the bushel. If you want them for scare-crows, take out the insides and thrown in a handful of salt to preserve them, and you can have crows to hang over the fields in the spring in any quantity; and depend upon it, they are perfectly horrified at the sight, and have no idea of entering premises where their black brethren are so uncivilly dealt with. H. H.—*Binbrook, C. W.*

Wool Growing in Michigan, &c.—An article in the last *Farmer*, taken from the census of 1850, does not show the present state of things; still it is interesting to wool-growers. Sheep and wool have increased rapidly the past two years, since the census of 1850 was taken. We have now in Michigan over 1,000,000 of sheep, and they cut more wool per head now than the census indicates. My opinion is, that Michigan wool this season averaged 35 cents. Our wool is clean, light, and profitable for manufacturers; and they are anxious to secure the wool as soon as it is clipped. We don't oil our sheep, to make the wool grow, and add one quarter to the weight of the fleece. I never purchased any eastern sheep; my flock were principally bred on my farm, and all cut good fleeces. Some of my yearling ewes cut over six pounds river-washed wool. I sold my last spring's clip for 40 cents per pound, before removing it off the premises.

According to the *United States Economist*, published weekly by Kittle & Mohr, Broadway, N. Y., at $3 per annum, there are 52,422,777 pounds of wool raised in the United States. The manufacturers work up 70,862,829 pounds. The supply and growth in 1850 was within a fraction of the quantity used. In the following year, 1851, the importations were increased to 32,537,071 pounds—nearly double that of any previous year—and the manufacturers paid $1,200,000 duty on the wool imported. The duty is 30 per cent. A Subscriber.—*Ann Arbor, Mich.*

Farming in Indiana.—Being a Western New York man, and somewhat acquainted with the mode of farming and the productions of the soil there, and now spending a few weeks in this State, I will, with your permission, give your numerous readers something of an idea of what can be done in Indiana.

A day or two since, I called on Mr. Hiram Bacon, who, if I mistake not, is one of your subscribers, and after consummating our business, the conversation turned to agriculture, when I drew from him the following facts: Mr. B. is a native of Massachusetts, came to this State in 1822, and located in Washington township, Marion county, upon the same farm upon which he now resides. His resident farm contains 350 acres, two hundred under cultivation, upon which he has six work horses, twenty-five milch cows, one hundred hogs, twenty-five head of young cattle, and sixty sheep; and during the past year he produced 1,650 bushels of wheat from 70 acres, 4,000 bushels of corn from 70 acres, 600 bushels of barley from 30 acres, and 300 bushels of oats from 7 acres. The value of wheat produced was $825; cash received for pork, $318; value of corn produced, $800; barley, $375; oats, $45; butter and cheese, $500; calves, $50; receipts of orchard, $100;—making the

total production of the 200 acres under cultivation, $3,013. Mr. B. is a scientific farmer, and avails himself of every facility for conducting his farm economically. He has located under the shed of his barn one of Emery's Two-Horse Railroad Powers, which runs a cross-cut saw, for preparing fire-wood at a saving of three-fourths the manual labor; pumps the water for his stock, which saves all the labor, save that of leading the horse on the power; runs his corn-sheller, by one horse, at the rate of 500 bushels per day; and he anticipates attaching a cornstalk-cutter and a corncob-crusher and grinder. Underneath his granary may be seen his farming implements, consisting of an eight-horse traveling threshing machine, which he takes into the field, passing from shock to shock, threshing and cleaning the grain as the machine moves on, at the rate of 300 bushels per day, with the labor of four hands, leaving the straw scattered upon the ground; also, drills, cultivators, &c., too numerous to mention. He has Densmore's Self-Raking Grain Reaper, with which he cut all of his own wheat and that of several of his neighbors, and performed (I use his language) to the entire satisfaction and admiration of all who witnessed it. He also added that it would have been almost impossible for him to have got through his harvest without it, and that he saved by its use at least one bushel of wheat per acre. J. O. Wilsea.—*Indianapolis, Ind.*

P. S.—Just as this was ready for the mail, Mr. Bacon happened in town, and the manuscript was submitted for his criticism, and it was discovered that there was a slight discrepancy in a few of the statements, viz: The pork was fattened, in part, from the corn, and the cows were fed a short time in the spring from the same production. But to offset this, I would say that there is no account made of the increase in the growth of young cattle, which was at least $100; the increase in sheep, which was something; the potato crop, which was $50; and many other smaller productions, of which no account is made. J. O. W.

Rotation of Crops.—May it not be possible that, after all, the theory of rotation of crops is founded in error? Do we not see in nature a system entirely the reverse of rotation? Do we not observe that in nature the elements of which one particular species of plants are composed are carried back by a simple process to the earth, to form a new crop of the same species? To illustrate, do we not observe that trees, whether oak, maple, pine, or any other of the almost endless variety of trees, drop each one its own leaves at its own foot? And if we analyze the vegetable mold found, for instance, at the foot of a beech tree, may we not reasonably expect to find there the best beech tree manure? Admitting for a moment the theory of rotation to be true, ought we not to find in nature a process by which the leaves of the maple, hemlock, or some other tree, may be conveyed to the roots of the beech? Do we see such a process? Again: If certain elements, A, B, C, &c., enter into the composition of a stalk of wheat, and certain other elements, D, E, F, into the composition of a stalk of oats; and if the growth of wheat exhausts the earth of a part of the wheat-growing elements, may we not infer that the soil will be restored to its primitive condition by the restoration of the elements A, B, C; or if a crop of oats, by its corresponding elements, D, E, F? In plain English, ought we not to manure our wheat lands with wheat straw, bran, &c., and our oat fields with oat straw? Is not this nature's process? Is not the whole system of rotation of crops a suicidal policy—first exhausting the land for raising wheat, then oats, then barley, and so on *ad infinitum*—never giving back to a crop its proper nutriment, and thus in fact impoverishing the whole country? Is not the subject of sufficient importance to attract the notice of agriculturists, and institute experiments extending through a series of years, that the matter may be well understood; and if correct, adopted; if founded in error, rejected? C. B. Rider.—*Pike, N. Y.*

It certainly is quite possible that the *theory* of rotation of crops is founded in error. It is hardly possible, however, that the *practice* of a rotation—as adopted by good practical agriculturists, and founded, not on theory at all, but on the results of close observation and long experience—is fundamentally wrong. Agriculture is not literally a natural process. Any means used to increase the natural yield of the earth, is more or less artificial. The art of agriculture may be wrong, but we necessarily must use *art* to obtain any increase over the natural yield of the soil. Will our friend point out a better system of culture—one that shall produce larger crops, and at the same time keep the soil in its original fertility.

The elements A, B, C, as well as D, E, F, enter into the composition of all our cultivated farm products. One crop does not require A, B, and C, and another crop D, E,

F; but both are composed of precisely the same elements, the only difference being in the relative proportions in which they enter the plant. There are some ten inorganic elements of plants, and four organic ones. The inorganic portion is derived wholly from the soil, the organic originally wholly from the atmosphere. The difference in the relative proportion of the inorganic elements required by different crops, is not sufficient to account for the benefit which experience proves is derived from a judicious rotation of crops; but when we look at the organic requirements of different crops, we see at once the value of rotation. Thus, to grow wheat, we require a very large amount of the organic elements nitrogen and hydrogen, which the atmosphere is capable of supplying for a small crop only. On the other hand, clover, turneps, peas, &c., are most amply provided with nitrogen and hydrogen, by the natural supply of the atmosphere. Their consumption on the farm by cattle, or by plowing them in without first passing them through the bodies of animals, furnishes an artificial supply of nitrogen and hydrogen for the wheat and other crops which require more than the atmosphere can naturally supply them.

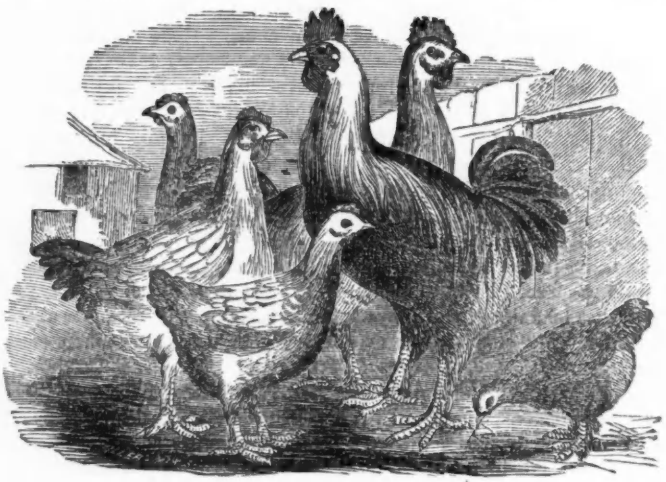
It is mal-practicing the art of agriculture, that is a suicidal policy, and is altogether unnecessary. It is possible to exhaust the soil sooner by a rotation of crops than otherwise, simply because it increases the yield and the quantity of the elements of plants yearly exported from the farm; but a judicious system of rotation and feeding not only increases the crops, but at the same time preserves the soil in more than natural fertility.

POULTRY—THE "HEN FEVER."

By reference to the premium list of the State Agricultural Society for past years, it will be seen that no premium has ever been offered for any of the "*fancy*" breeds of fowls. The only premium offered for which these fowls could compete, was that offered for "the best lot of Malay or Chittagong fowls." The present year is the first that any of the "*improved*" kinds have been mentioned, when an offer was made for "the best lot of Shanghae, Chittagong, or Malay fowls." Notwithstanding the evident intention of the officers of the Society to discourage the breeding of improved varieties, or their refusal to acknowledge them as constituting distinct varieties or breeds, yet nine-tenths of all the fowls exhibited at Utica were of this class—showing that the framers of the premium list have labored in vain to stay the popular current. Editors of several of the agricultural papers, too, have exerted all their powers of ridicule, having drawn largely on their imagination for portraits of what they call in derision Shang-*high* fowls, and exhibited at once their wit and their folly. We have invariably observed that those who have kept the Shanghae and Cochin China, speak in their praise; and those who so freely pronounce them a humbug, and no better than the common barn-yard fowl, know nothing of them by experience.

We have received something like a dozen inquiries, during the last two or three months, as to the merits of these fowls, and their superiority over the common fowl, some of our correspondents expressing the belief that the "hen fever is all a humbug, got up by speculators for the purpose of obtaining money under false pretences." Instead of answering each inquirer in our "*Answers to Inquiries*," we shall endeavor to satisfy all in this article. Having kept "*fancy*" fowls, and fowls that are not considered "*fancy*," for several years, we shall only give the teachings of our own experience. If any of our readers differ in opinion, and will give us the facts on which their opinions are founded, we will gladly make them public.

The *Cochin China* and *Shanghae* are much *larger* than our common fowls, probably averaging three times their weight. Of about fifty we raised last year, the smallest hen



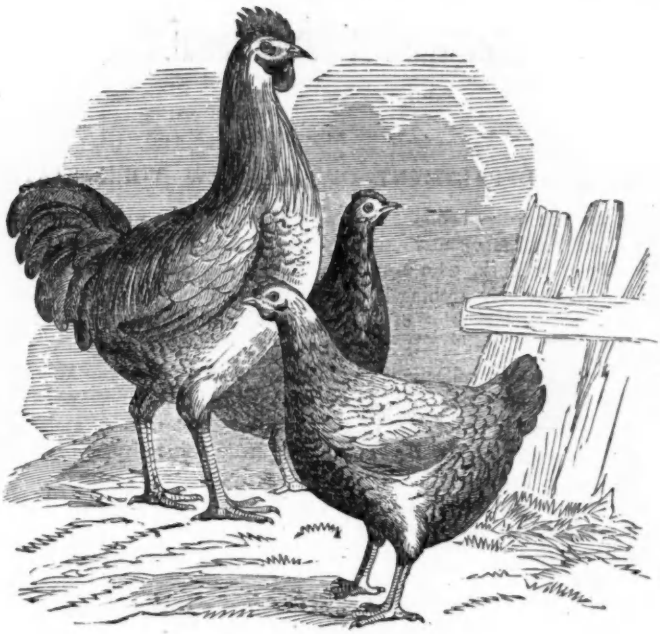
GROUP OF SHANGHAE FOWLS.

weighed six pounds, and the largest cock ten pounds, at one year old. They produce *more eggs* than any fowls we have ever kept. The hens often commence laying in less than three weeks after hatching a brood, and continue laying every day regularly, at the same time taking care of the chickens until they are able to care for themselves. We made a present of a pair of Shanghae fowls to a gentleman well known to all agricultural and horticultural readers. After a few weeks, happening to be at his place, we inquired how the fowls prospered, and was told that the hen had not layed. Thinking this strange, we asked to see what eggs they had, when we found between two and three dozen of the eggs laid by our pullet, which we readily recognized. On pointing out her eggs to our friend, he remarked: "My wife has several times observed that the hen that layed the yellow eggs, layed more than all the others." He had some half a dozen in all.

They are *good mothers*, but lay a large number of eggs before wanting to sit — generally from forty to sixty. The young chickens are very hardy — much more so than any others we know of. In several cases, when raising very late or very early chickens, we have had broods part Shanghae or Cochin China, and part common chickens, and lost nearly all the common without loosing one of the others.

The eggs of pullets the first year are small. Indeed, these fowls do not arrive at full maturity in less than eighteen months. For this reason we think it would be better to raise crosses to kill in the fall. We killed a dozen crosses last year, at about six months old, the smallest of which weighed six pounds dressed. They were from common hens and Shanghae cock. We also killed several Shanghae and Cochin China chickens at about the same age, taking a little pains to test the quality of the flesh, and disregarding the scripture injunction to call in the "halt, the lame, and the blind," invited a few of our friends who are good judges of what a fowl should be, and they were unanimously pronounced first rate, and no difference could be detected between the flesh of the crosses and pure bloods, as to fineness or flavor. There is some satisfaction in carving from a chicken that weighs from six to seven pounds.

The engraving of Shanghae fowls given in this article, were taken by an artist in our own yard. They range from six weeks to six months old. The Cochin China fowls are portraits of G. P. Burnham's, of Massachusetts; and they bear such a striking



GROUP OF COCHIN CHINA FOWLS.

resemblance to our own stock, obtained from Mr. B., that we thought it useless to endeavor to take more correct likenesses. The difference between these two varieties is very slight, as is also that between the white and colored Shanghae.

That there is a good deal of humbugging and dishonesty in the chicken speculation, we too well know. We have before us a letter from a gentleman at Seneca Falls, who procured two dozen of White Shanghae eggs, at four dollars a dozen, of a person in this city, and the chickens were of all colors and all shapes, only two or three being white. We know of many others served in the same way. This same individual boasts that he has made a thousand dollars in the chicken speculation this season. He figured largely at the State Fair, and, we believe, took several premiums. We would advise our friends not to buy eggs, unless they know those with whom they are dealing to be honest. We saw at the State Fair a mongrel rooster (whose parentage we know all about, having ourselves brought the egg from which he was hatched from the east,) placed in a coop with a good hen, and labelled Cochin China; and we were told, after we left, the pair was sold for twenty-five dollars. One of our editorial brethren of the south was looking at a coop of mongrels, and observing to a friend that they were not as represented, and were not worth more than twenty-five cents each, when he was gently touched on the elbow and requested to "*speak low*," by the owner, who was making a bargain with some green-horn for these same fowls at twenty-five dollars a pair, and which bargain he was likely to spoil. There is no need of paying such extravagant prices at the present time, even for good fowls, as there are plenty of the Shanghae fowls, both white and colored, and also the Cochin China, pure and fine, that can be had in this neighborhood for five dollars per pair. We might fill another page with the misdeeds of some of the chicken dealers, but we have given enough to place our friends on their guard.

Horticultural Department.

CONDUCTED BY P. BARRY.

HORTICULTURAL DEPARTMENT OF THE NEW YORK STATE FAIR.

The floral tent was much less brilliant than usual, owing to the want of interior decorations, and very small and few contributions of flowers and flowering plants. The cultivators of Western New York, who usually make rich displays of flowers on such occasions, could do comparatively nothing in consequence of the severe drouth that prevailed previous to the Fair, and swarms of grass-hoppers that consumed almost everything that the drouth spared.

We noticed but two small collections of dahlias — one from Edward M. Van Alstyn, of Greenbush, and the other from Wm. Newcomb, of Pittstown. Both were good; but, if we are not mistaken, those of Mr. Van Alstyn were not named, and lost much of their value in consequence. Mr. Newcomb also made a fine display of verbenas and seedling phloxes.

Mrs. S. E. Smith, of Mechanicsville, presented a design worked with China asters.

Jas. Wilson, of Albany, two charming hand boquets.

Messrs. A. Frost & Co., of Rochester, two cases of verbenas, one of asters, and one of roses and dahlias.

Messrs. Thorp, Smith, Hanchett, & Co., of Syracuse, a large collection of pot plants.

Ellwanger & Barry, of Rochester, a collection of phloxes, verbenas, roses, petunias, &c., besides green-house plants and rare evergreen trees in pots.

Tasteful ornaments of various designs, moss baskets, beautiful boquets, &c., were contributed by Messrs. H. W. Rockwell, Jas. Van Namee, Silas D. Childs, and others, of Utica; Mrs. Dudgen, of New Hartford; Mrs. Bullard, and others. Most of the designs presented as floral ornaments were really chaste and pretty; but some of them, we are compelled to say, were shapeless monstrosities, at which all true taste must revolt; and we beg those who have mistakenly devoted so much labor to them, to expend it in future on objects that will do both themselves and the exhibition more credit.

The fruit department was well sustained. Indeed, we are inclined to think that, notwithstanding the earliness of the season, it was on the whole the most creditable branch of the entire show — the poultry and stove departments not excepted. The State was represented, by greater or smaller contributions, almost from one end to the other. Peaches were less abundant than usual, but pears so much better as to fully compensate for any such deficiencies. Apples and plums were also abundant and fine.

Among amateur cultivators we have to place Mr. Vail, of Troy, at the head, as having the finest collection of fruits on exhibition; the varieties were select and fine, and the specimens really superb. His *Doyenne Boussock* pears and *Jefferson* plums attracted general attention, as did all his varieties.

P. Brentnall, Esq., of Utica, exhibited twelve varieties of choice pears, in a very tasteful manner. We noted this as an excellent contribution.

Gen. Lewis Eaton and Prof. W. R. Coppock, of Buffalo, each presented a number of choice varieties.

Messrs. N. Hayward & Son, of Brighton, presented a very large and fine collection of apples — probably the best that any farmers in the State could show.

The nurserymen turned out in great numbers and strength. Messrs. C. Reagles & Son, of Schenectady, presented a fine collection of some thirty varieties, or more, of plums.

Mr. JOHN MORSE, of Cayuga Bridge, a large collection of pears—good sorts, and fair, well grown specimens generally, though not quite as good as he has heretofore shown.

Messrs. THORP, SMITH, HANCHETT, & Co., of Syracuse, presented some seventy varieties of pears, many of them quite new.

T. C. MAXWELL, of Geneva, presented a small collection of select pears—*Bartlett, Dearborn's Seedling, Flemish Beauty, Belle Lucrative, &c.*—all fine and handsome. Also, choice varieties of apples, among which a large dish of the *Primate* (once noticed in the *Farmer* as "*Rough and Ready*") attracted much attention.

JNO. C. HASTINGS, of Clinton, Oneida county, made a great display of various fruits, in large dishes of each variety.

Mr. HENRY FREEMAN, of Richfield, Otsego Co., made a handsome display of apples; and we were particularly glad to meet them from that locality. He had *Red Astracans* yet in good condition, and we noted two or three varieties of merit that are not much known. We are glad to see Otsego county enter the list of fruit growers, and with so worthy and intelligent a representative as Mr. FREEMAN.

E. G. STUDLEY, of Claverack, Columbia Co., contributed some fine samples of apples, among which are some new to our part of the State.

Preserved Fruits.—Mr. and Mrs. W. R. SMITH, of Macedon, exhibited some dozen glass jars of peaches, cherries, &c., in very tasteful style. These fruits are preserved neither in vinegar nor alcohol, but in their own natural juice. Last winter we had a jar or two of their peaches, and on opening we found the flavor little different from that of fruit just taken from the tree. This is a most useful art, and Mr. and Mrs. SMITH are improving it and practicing it on a most extensive scale.

Foreign Grapes.—Hon. JOHN GREIG, of Canandaigua, presented some very fine bunches of *Black Hamburgh*, and several other varieties. H. L. SUYDAM, of Geneva, exhibited *Black Hamburgh, St. Peter's, and Zinfindal*—superb bunches, from 2½ to 3 pounds each, well colored, and fine. We presume they took the premium. Mr. SUYDAM is a most zealous and successful amateur cultivator.

We will take this occasion to suggest an improvement much needed in the way of showing fruits offered for special premiums at these shows. There was a premium of $10 offered for the best twenty varieties of apples. Now, the proper way would have been for all the collections offered for this premium to be placed together, side by side, without the names of the growers, but merely the numbers of entry, until after the decision of the judges. Instead of this, they were scattered about in all parts of the tent, and gave the committee a great deal of unnecessary labor; and their decisions can not be so correct as they would have been in the other case. It was the same in regard to pears and other fruits, and we trust it will receive attention before another exhibition. We will take another occasion to speak of it.

There was a premium offered for "the best collection of newly introduced pears, with description," &c. Now we consider it scarcely less than absurd to require a cultivator not only to grow the fruit and present it properly labelled, but accompanied with a *description.* It might happen that the person who presented the best collection of new pears, had not fruited them before; and how could he give a description of them? It might not be improper to ask that native and foreign sorts should be respectively so designated, but such an unreasonable condition as that alluded to is in reality a *tax* upon the introduction of new fruits, which those who made out the premium list perhaps thought it best to impose.

We have to make special mention of a fine collection of pears, consisting of 104 varieties, shown by Messrs. HOVEY & Co., of Boston. They were very valuable as affording an opportunity to compare the growth of distant parts of the country, and to aid in correcting errors in nomenclature, where such existed.

The nurserymen and fruit growers held several evening meetings during the Fair, and

had some pleasant and profitable conversations, to which we will hereafter refer. On the whole, we believe they enjoyed the opportunity of meeting as well as any other class of men, and returned home well satisfied that their time was not lost.

We have not seen the reports of committees.

In the vegetable department the display was excellent. Indeed, we do not remember having seen a better at any previous Fair. Beets, cabbages, onions, sweet corn, Lima beans, squashes, pumpkins, tomatoes, carrots, celery, watermelons, muskmelons, potatoes, parsneps, egg plants, leeks, parsley, and indeed all the common garden vegetables, were shown in remarkable perfection. The tent appropriated to this branch was filled to overflowing, and very few inferior, poorly grown articles, were to be seen. We have never seen so many Lima beans exhibited at any show in this State, and we are very glad to see this finest of all beans receive increased attention. Potatoes, too, were exhibited in unusual abundance and perfection. Mr. C. E. Goodrich, of Utica, made a large display of seedling varieties, said to have been grown under the direction of the State Agricultural Society. We had not sufficient leisure to examine them minutely, but we have no doubt our agricultural friends gave them due attention. Mr. G. was imparting some very valuable information, in regard to his experiments. We were particularly struck with the fine appearance of the "*Mexican*" potato in several collections, and with a variety called the "*Mackinaw White*," shown by Mr. S. H. Addington, of Marshall, near Utica. It strikes us that the attention now given to the potato, must result in great improvement. The principal contributors in this department were, Messrs. E. Williams, C. Spratt, C. A. Mann, C. E. Goodrich, and W. Gray, of Utica; James Hallock, of Whitesboro; Jacob New, of Canandaigua; V. W. Boyce, Ithaca; S. H. Addington, of Marshall; N. & E. Hayward, of Brighton; C. F. Crosman and Theodore Backus, of Rochester.

Rustic Work.—We had almost forgotten to mention two or three fine specimens of rustic work exhibited in Floral Hall, from a Socialist or Fourierite community in Oneida county. Two of the finest rustic chairs we have ever seen, combining great strength with elegance of design and completeness of execution; one was valued, we were informed, at $30, and the other at $15. A picture frame, from the same source and in the same style, was greatly admired. Would it not be well enough for the Society hereafter to offer suitable premiums for cottage and garden rustic work of this sort?

THE POMOLOGICAL CONGRESS.

This body met according to appointment, in Philadelphia, on the 13th September. There was a large attendance of delegates from several States, and a most imposing display of fruits. The President, Dr. Brinkle, in conjunction with the Pennsylvania Horticultural Society, had made all proper arrangements for the meeting, so that there were no difficulties or obstacles to be met or overcome. The proper business of the Convention was at once entered upon, and proceeded with the greatest regularity, harmony, and dispatch. The first day was consumed in arranging the fruits, choosing officers, and organizing committees. Very little, we believe, was done in the way of discussing the merits of fruits. The retiring President, Dr. Brinkle, who has most ably and faithfully discharged his duties, delivered an address abounding in useful suggestions for the future, and noting the more important events of the past year, such as the death of members of the Society, &c. The address was timely and able, and is justly considered as laying a broad and firm basis for future action. The second day, the various committees entered upon their duties, and the Convention proceeded with the completion of the lists of officers and committees, and at intervals with discussion on fruits.

At the close of the second day the members felt that, although the time fixed upon for adjournment had come, they were just prepared to commence a profitable session. A large number of them, ourself included, had been nearly all the time engaged on committees, and had enjoyed no opportunity for an interchange of opinion on the subjects that had been brought forward. We believe it is the general determination to occupy an entire week with the next session; and this we think will be absolutely necessary, in order to accomplish much practical good.

The Hon. M. P. WILDER pronounced an eulogy on the character of the late Mr. DOWNING, on the evening of the first day, in the Musical Fund Hall. The audience was large and select, and a mournful, solemn stillness pervaded it, indicative of a deep and melancholy interest in the theme of the oration. It was an able and elegant production, and will be published with the proceedings.

The following is a list of the officers chosen:

President.—MARSHALL P. WILDER, of Massachusetts.

Vice Presidents.—One from nearly every State and Territory, including the Canadas, California, and Oregon.

Secretaries.—F. R. ELLIOT, of Ohio; JAMES H. WATTS, of New York; H. W. S. CLEVELAND, of New Jersey.

Treasurer.—THOS. P. JAMES, of Philadelphia.

Executive Committee.—Dr. W. D. BRINKLE, of Philadelphia; B. V. FRENCH, of Massachusetts; Mr. PETERS, Dr. H. WENDELL, Albany, N. Y.; Dr. J. A. WARDER, Cincinnati; and the President, and 1st Vice President ex-officio.

Committee on Foreign Fruits.—C. M. HOVEY, Massachusetts; P. BARRY, CHAS. DOWNING, J. P. KIRKLAND, New York; R. BUIST, Pennsylvania; S. L. GOODALL, Maine; C. B. LINES, Connecticut.

Committee on Native Fruits.—W. D. BRINCKLE, Pennsylvania; F. R. ELLIOT, Ohio; E. TATNALL, Jr., Delaware; THOS. HANCOCK, New Jersey; Col. HODGE, New York; H. P. BYRAM, Kentucky; ROBERT MANNING, Massachusetts.

Committee on Synonyms.—J. S. CABOT, Massachusetts; J. J. THOMAS, New York; A. H. ERNST, Ohio; J. A. KENNICOTT, Illinois; S. D. PARDEE, Connecticut; A. GAUL, New York; J. D. FULTON, Pennsylvania.

Chairmen of State Fruit Committees, (each one having power to select such persons, in his own State, as will constitute a complete and efficient committee.)—*General Chairman*—SAMUEL WALKER, Roxbury, Mass. New York—P. Barry, Rochester. Pennsylvania—Thomas P. James, Philadelphia. Delaware—Dr. Lewis P. Bush, Wilmington. District of Columbia—Joshua Pierce, Washington. Georgia—Stephen Elliott, Jr., Savannah. Virginia—Yardley Taylor, Purcell's Store, Loudon Co. Maine—Hy. Little, Bangor. New Hampshire—H. F. French, Exeter. Massachusetts—Ebenezer Wright, Boston. Vermont—C. Goodrich, Burlington. Rhode Island—Stephen H. Smith, Providence. Connecticut—George Gabriel, New Haven. New Jersey—Wm. Reed, Elizabethtown. Maryland—Samuel Feast, Baltimore. South Carolina—Wm. Sumner, Pomaria. North Carolina—Henry K. Burgwyn, Jackson. Ohio—R. Buchanan, Cincinnati. Illinois—J. A. Kennicott, Northfield. Indiana—J. D. G. Nelson, Fort Wayne. California—Capt. F. W. Macondray, San Francisco. Alabama—Charles A. Peabody, Gerard. Florida—A. G. Sems, Quincy, Gadsden Co. Kentucky—E. D. Hobbs, Louisville. Mississippi—Thomas Affleck, Washington. Iowa—James Grant, Davenport. Missouri—Thomas Allen, St. Louis.

A constitution was adopted, in which the name is changed to "American Pomological Society," and membership fixed at $20 for a life member, and $2 for a biennial membership.

A resolution was offered by Mr. ROBERT BUIST, and adopted, appointing a committee to raise a fund of $20,000 or more, in subscriptions of $1 and upwards, to be invested for the benefit of the widow of the late Mr. DOWNING, or to be expended otherwise in some fitting monument to his memory. The President, ROBERT BUIST, CALEB COPE, H. W. S. CLEVELAND, B. HODGE, F. R. ELLIOT, L. YOUNG, D. W. BRECKENRIDGE, and J. A. KENNICOTT, constitute such committee.

J. S. CABOT, Esq., President of the Massachusetts Horticultural Society, invited the Pomological Society to meet in Boston in 1854, and a resolution of adjournment was passed to that effect.

The details of the doings of the Society will soon reach us, and we shall then make

such extracts from the proceedings, in regard to the merits of fruits, &c., as we shall consider of more immediate interest.

The Pennsylvania Horticultural Society.—The day after adjournment, we had an opportunity of glancing over the splendid exhibition of the Pennsylvania Horticultural Society. The great hall formerly known as the Chinese Museum, was filled with pot plants, floral ornaments, and cut flowers. A fountain was playing away in the center, and close to it was a *pond*, on the bosom of which floated the gorgeous and wonderful water lily, *Victoria regia*. The specimen was small, but perfect. We noticed very large and fine old specimens of exotics, such as collections of half a century's standing could alone produce. The smaller plants were no way remarkable—at least, not remarkable for their beauty—and were so mixed up for the purpose of heightening the general effect, that they could not be well examined. The *Manetlia* was trained into pretty figures, on wire; and being in full bloom, they were the most ornamental, and we think the most tasteful objects in the room. The display of cut flowers was quite below what we anticipated seeing. We noted but two or three collections of dahlias. The season has been rather unfavorable for dahlias almost everywhere, as far as we are aware.

The fruit and vegetables were shown in a hall above that devoted to the flowers, and the display of these was, in our opinion, much better than the floral; it as much exceeded our expectations, as the other fell below. The fruits were large, beautifully colored, and exhibited in large quantities, making a magnificent appearance. The size of some of the specimens surpassed anything we have seen. We had here the pleasure of making an intimate acquaintance with some Pennsylvania varieties we much desired to see at home. The show of vegetables, too, was exceedingly rich; the articles were grown in great perfection, and shown in profusion and excellent taste. There are good practical gardeners about Philadelphia, and they receive ample encouragement from a wealthy, refined, and liberal population. The markets are proof of this.

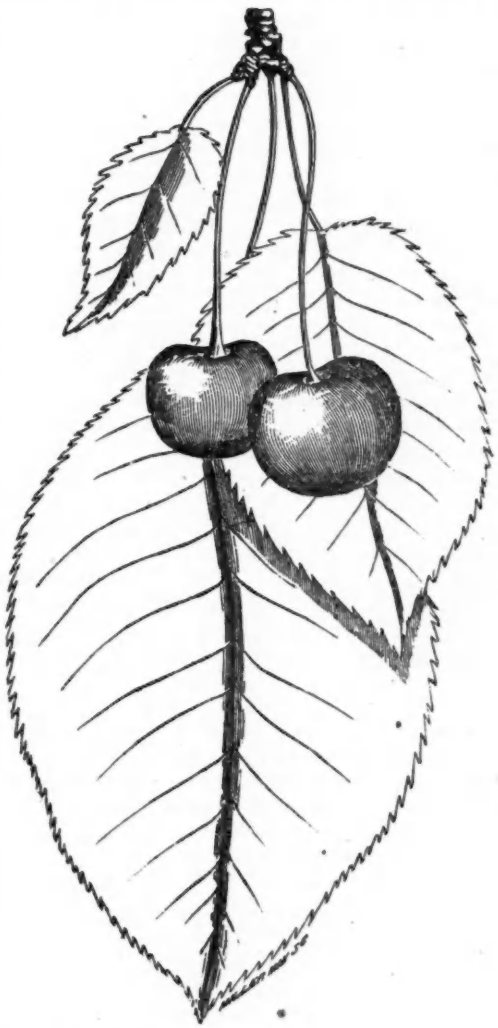
We can not now go further in noticing objects and matters of interest, but will add that our visit was a most pleasant one—by far too short. We await an opportunity to reciprocate the kind attentions shown us.

Pears that succeed well on the Quince.—During the State Fair, at Utica, a few nurserymen and fruit growers held evening meetings, for the purpose of conversation or discussion on topics connected with fruits and fruit culture. Among other subjects that came up at these meetings, was, "What pears really succeed well on the quince, after several years' trial?" The question was put, we believe, by J. J. Thomas, and it was proposed that each one present should name such varieties as they had sufficient experience with. The following varieties, and probably a few others, were then named: *Louise Bonne de Jersey, Glout Morceau, Vicar of Winkfield, Urbaniste, Beurre Diel, Beurre d'Amalis, Panache, Long Green, Long Green Striped, White Doyenne, Duchesse d'Angouleme, Bergamotte Cadette, Easter Beurre, Doyenne d' hiver d'Alencon, Stevens' Genesee, Henry IV, Summer Francreal, Fig, Napoleon, Gray Doyenne.* We believe no one objected to any of the above twenty varieties, except *Stevens' Genesee*, with which some thought there had not yet been sufficient experience. *Urbaniste* was stated to be a slow and poor grower on the quince when young, but to improve with age.

Of gentlemen present who participated in the remarks and doings, we remember Wm. R. Prince, of Flushing; C. M. Hovey, of Boston; John J. Thomas, of Macedon; Prof. Coppock, of Buffalo; Dr. J. A. Warder, F. R. Elliot, and M. Kelly, of Ohio; H. E. Hooker, of Rochester. There is something definite and reliable in this kind of information.

THE MERVEILLE DE SEPTEMBER CHERRY.

Some five or six years ago we received a cherry under this name, from France. We had little faith in its being of much value, and hence propagated it very sparingly. On its coming into bearing, some two or three years since, we found it small, rather dry, and of indifferent flavor, and concluded it was nearly worthless; but we find, as the tree grows older, the fruit improves both in size and quality; and this year we had two trees that bore a fair crop of handsome fruit, not first rate, but of fair quality, and ripening at an extraordinary season for a sweet cherry —the beginning of September; and if let alone by the birds, would last through the greater part of that month.



The fruit is medium size, dark purplish red, when fully ripe, resembling in size and color the *Early Purple Guigne.* The flesh is rather firm, sweet, and pleasant; must be fully ripe to be in its best condition, and appears ripe long before it is so. Worthy a place in large collections, as being the latest sweet cherry known. The tree is an erect, rapid grower, like the heart varieties, and bears fair crops. Fruit improves as the trees grow older. Season, Sept.

Our space is so much occupied with notices of the Pomological Congress and the fruit exhibition of our own State Society, that we are compelled to omit other matters that should have appeared in this number.

Manufactured Manures.—A meeting of gentlemen connected with the agricultural interests in England, was recently held in London, to take into consideration measures for the reduction of the cost of guano and other portable manures. Resolutions were passed to the effect that the establishment of a public company for the manufacture of a *cheap* manure *equal to guano*, would be abundantly remunerative to capitalists, and a great national advantage; and that a provisional committee be appointed to carry out that object.

Editor's Table.

New York State Fair.—The annual exhibition of the New York State Agricultural Society took place at Utica, on the 7th, 8th, 9th, and 10th of September, being nine days earlier than that held at Rochester last year. This alteration brought the Fair just at the busiest time of wheat sowing, and this may in part account for a considerable diminution in the number of farmers present. There was, however, on the whole, no diminution in the quality of articles exhibited, and some of the departments were superior—that of dairy products in particular. Utica being in the center of a dairy district, we expected a first rate show of cheese; but in this particular the Fair exceeded our most sanguine expectations. There were also three new cheese presses exhibited, which struck us as being improvements on all we have before seen.

In the stock department, the Durhams and Devons were well represented, both in respect to quality and numbers. There were but few Herefords and Ayrshires shown, but they were of superior character. There was one lot of Alderneys exhibited by Roswell L. Colt, of Patterson, N. J. This breed of cattle is very small, and it is next to impossible to fatten them; but they are said to yield richer milk, and more of it for a given amount of food, than any other. There was a good show of grade cattle, and also a very large number of good working cattle—more so than at any preceding Fair we have visited.

In farm and carriage horses, the show was not creditable, and we should judge was by no means a fair representation of the horses in the district. There was a goodly number of superior stallions and brood mares; and had we seen but these, we should have supposed the surrounding counties well supplied with superior working horses.

As fodder of all kinds is likely to be exceedingly scarce this coming winter, and there will therefore be a large demand for hay and cornstalk cutters, we were glad to see so many on exhibition from all sections of the country. One manufactured by Taylor, Thomas, & Co., 125 Pearl street, N. Y., on an entirely new principle, appeared to do the work with great ease and rapidity.—"Webb's patent," exhibited by J. E. Dutton & Co., of Oswego county, did its work first rate.

The number of sheep exhibited was small, and, on the whole, by no means superior. There were, however, a few good specimens of the various breeds. J. D. Patterson, of Westfield, Chautauque county, N. Y., had some splendid French Merinos, and we believe took the first premium for the best pen of five ewes, and for the best buck. Sharp & Taylor, of Lockport, N. Y., also exhibited some beauties, recently imported by Jewett & Co., of Vermont. They obtained the premium for the second best pen of five ewes, and for the second best buck, and also the first premium for a yearling buck. Reed Burritt, of Burdett, N. Y., exhibited a fine Silesian buck. In Long and Middle Wooled sheep there was but an indifferent show. John McDonald, of Warren, Herkimer county, N. Y., had a pen of eight Leicester ewes, which pleased us exceedingly. Mr. Wakeman, of Herkimer, N. Y., exhibited some very fine South Downs, as also did Col. Sherwood, of Auburn.

The show of hogs was small, but of very superior quality. (We wish this was a more general characteristic of our Fairs.) A. L. Fish, of Litchfield, Herkimer county, N. Y., exhibited a pen of Suffolks, which were very fine, and attracted considerable notice. This is a small breed, but matures early, and lays on fat with great rapidity. A pen of four, under one year old, of a "small breed," belonging to James Platt, of Attica, N. Y., was very fine. There were also some very good Berkshire and Yorkshire sows, and some excellent crosses. We expected to have seen some of the Chinese breed, but were disappointed.

In the poultry department the show was excellent and very attractive.

In agricultural implements and machines the show was good, but not so extensive as was expected. J. Rapalje & Co., Rochester, had a large assortment of all kinds of implements and machines. Emery & Co., and Wheeler, Melick, & Co., of Albany, were on hand with their celebrated Horse Powers, which attracted considerable attention.

The Reapers, Mowing Machines, Drills, &c., received close attention, and were much admired.

We have to acknowledge the receipt of various favors from our friends, in the form of ripe fruit, &c. To friend Parks, of Victor, we are indebted for fine watermelons; to H. H. Gunter, of Gunter's Hotel, New York, for a barrel of sweet potatoes. If any of our friends visit New York city, they will find Mr. G. always at home, and attentive to their wants, at his house, 145 and 147, Fulton street.

DEATH OF J. P. NORTON.—While at the State Fair, we heard the melancholy intelligence of the death of J. P. NORTON. For some years Mr. NORTON has been at the head of the department of chemistry applied to agriculture, and the phenomena of vegetable and animal life, in Yale College. Prof. NORTON, though but a young man, only 30 years of age, had spent three years in Europe, under eminent professors in Great Britain and on the continent, and has devoted his time and talents principally to the investigation of chemistry as applied to agriculture. Many of our young men have had the benefit of his instructions, in college, and his contributions to the agricultural press have been invaluable. In the death of NORTON and DOWNING, the friends of agriculture and horticulture have lost their brightest lights, and truly have cause to mourn. But they did a good work while the day lasted. Let us follow in their footsteps.

TERRA CULTURE.—Some correspondents have inquired whether the lecture and disclosures of Mr. COMSTOCK are worth the price charged—one dollar. If we should lecture on the importance of *doing every thing in season*—leaving nothing for the morrow that can be done to-day,—and should spend an hour in enforcing this rule upon our audience, perhaps nine out of ten might receive a dollar's worth of benefit from our lecture. Still, we might say nothing new—nothing but what others know as well as ourselves. The facts stated by Mr. COMSTOCK, are mostly to be found in horticultural works; and the little there is new in the lecture, and which Mr. C. calls his *secret*, we think is not sustained by facts. Mr. COMSTOCK shows very little knowledge of vegetable physiology. His pretensions to prevent the potato rot, the destruction of wheat by fly, weevil, &c., is the sheerest humbug. What there is *good* in the lecture, every intelligent cultivator knows; and what there is *new*, is at least very doubtful.

STATE FAIRS.—The State Fairs this year have generally been unusually successful. We shall give notices of several next month.

B. P. JOHNSON, Esq., of Albany, will accept our thanks for his interesting work on the World's Fair of 1851.

ADVERTISEMENTS, to secure insertion in the *Farmer*, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. We publish no other. Terms—$2.00 for every hundred words, each insertion, *paid in aduance.*

AGRICULTURAL FAIRS.—Below we publish all the agricultural Fairs to be held this fall that have come to our knowledge.

STATE FAIRS.

Pennsylvania, at Lancaster,	Oct.	20, 21, 22
New Hampshire, at Meredith Bridge,	"	6, 7, 8
Indiana, at Indianapolis,	"	19, 20, 21
New Brunswick, at Fredericton,	"	5 to 9
Wisconsin, at Milwaukie,	"	6, 7, 8
Georgia,	"	18 to 23
Maryland, at Baltimore,	"	26, 27, 28, 29
American Institute, at New York,	"	5
" Exhib. of Stock,	"	19, 20, 21

COUNTY FAIRS.

Genesee,	Oct.	6, 7
Cayuga, at Auburn,	"	6, 7
Putnam, at Carmel,	"	5, 6
Richmond,	"	17
Dutchess, at Washington Hollow,	"	5, 6
Westchester, at White Plains,	"	6, 7, 8

Inquiries and Answers.

(EDWARD HEDLEY, Medina.) We do not know that there are any rabbit warrens in this or adjoining States. Have never seen the silver grey rabbit in this country.

(H. M. B., Oswego county, N. Y.) SWAMP MUCK.—The value of swamp muck, and the purposes for which it is best adapted, depend a great deal on the location in which it is formed. It is therefore impossible for us to say arbitrarily whether it would or would not be of much value as a manure for light gravelly soil.

Muck, like peat, is very insoluble, and incapable of furnishing its elements of fertility to plants until decomposed. To decompose it, however, is not an easy matter, owing to its antiseptic properties. Composting it with caustic lime or ashes, will decompose it most readily; but as these substances set free any ammonia the muck may contain, and facilitate its escape, they should not be used for this purpose. A good plan is to throw it up loosely in the fall, in some dry place, and let the frosts of winter pulverize and dry it. When dry, it may be placed in alternate layers with fresh horse manure, sea weeds, or any rapidly fermenting substance. If, too, the heap is so placed that the liquid manure of the barn-yard could be pumped upon it, so much the better. In this way it rapidly decomposes, and a manure is obtained which is valuable for most cultivated crops, especially for beets, turneps, cabbages, and other vegetables, and well repays the labor. Dry muck is also of much value as an absorbent of liquid manure, and may advantagously be used for that purpose on all farms where readily obtained. Will some of our readers who have used it, give us their experience in the best methods of digging, drying, and decomposing it, and the effects produced.

GUANO ON WHEAT.—How shall I apply guano most profitably to wheat? And what is the best method of preserving grapes in their natural state, for winter use? C. W. —*Pleasantville.*

The best time to apply guano to the wheat crop, is in the fall; such is the result of experiment. As regards the best method of application, much difference of opinion exists; not so much, however, among practical farmers, as among the ranks of agricultural chemists and mere theoretical farmers. Some contend that there is a great loss of ammonia (the principal element of guano, of value to the wheat plant,) if applied to the soil, without some chemical means being used to fix it. Gypsum (sulphate of lime) is recommended for this purpose; likewise common salt, charcoal dust, and peat, have their several advocates.

If gypsum would fix the ammonia of guano, by converting it into the sulphate of ammonia, we would say, always mix plaster with the guano previous to sowing. *But it will not.* When perfectly dry, it has no effect at all on guano; but when slightly moistened with water, and allowed to remain for some time, not only will it not fix the ammonia, *but actually liberates it, and is therefore worse than useless.* It is perfectly true that, in a chemical sense, sulphate of lime will decompose carbonate ammonia, forming the fixed salt sulphate of ammonia, and the insoluble carbonate of lime. But chemists always operate with their substances in solution, and it is only when sulphate of lime is in solution that it will fix carbonate of ammonia; so that it is of no use mixing gypsum with guano, for the purpose of retaining the ammonia.

The ammonia of guano, in its unmixed state, will probably escape to some extent on exposure to the air, in consequence of decomposition; but we believe that as soon as the guano is mixed with the soil, there is no longer any evaporation of ammonia. It is known that several kinds of soils will *attract ammonia;* and the experiments of Mr. WAY show that some soils retain it with great tenacity.

In sowing guano on wheat, therefore, we think it a waste of time, to say the least, to be at any trouble in trying to fix the ammonia. Our method has been. first to break the lumps of the guano until they would pass through a seive, and then re-bag, take it to the field, and sow it *alone* at the rate of two to four cwt. per acre, dragging it in immediately, sowing the wheat at the same time. This way answers well, and we know of no better.

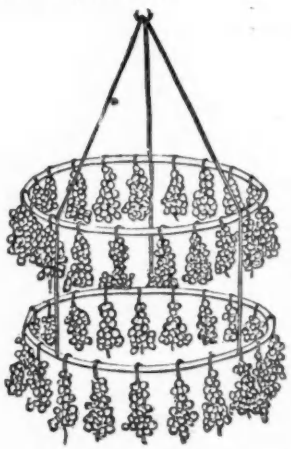
In England, guano is often sown on the young wheat plant in early spring, and answers a good purpose in this way; but fall sowing is there considered the best by most farmers who have tried both plans.

If our friend tries guano on wheat, we hope he will let us know the result.

If it was but half its present price, the application of guano on wheat would be attended with great profit. At the present relative prices of guano and wheat, it may pay to use it, yet the prospect of *profit* is not very bright.

Preserving Grapes.—We find no difficulty in preserving grapes in a very simple way. This year we had fine *Isabellas* in abundance as late as the 20th of April. We pick the grapes on a dry day, cut out with scissors any imperfect or bruised berries, and then spread the bunches on the floor of a vacant room, or on shelves, first covering the floor with paper. We let them lie in this way about a week, and then pack them away in boxes, putting a layer of cotton batting between each layer of grapes. The boxes we put in a cool, dry place. Last year we appropriated a closet in the upper part of the house, for the purpose; and a party of friends who "tasted" our last dish of grapes, unanimously declared they were as fine as when first taken from the vines.

While on this subject, we give a new method, adopted to some extent in France, which we take from the *Albany Cultivator:*



"A new method of keeping grapes in winter has been practiced in France, consisting essentially in hanging up the bunches separately, *by the smaller end* on wire hooks. Small wires, of sufficient stiffness, and a few inches in length, are bent into hooks in the shape of the letter S: one end is passed into the smaller end of the bunch, and the other placed upon a suspension hoop, as shown in the annexed figure. The position of the bunches causes every berry *to hang away from its neighbor*, and consequently they are less liable to rot by contact, than by any other arrangement.

The hoops are suspended by three cords or wires to a

button overhead, like the hook of a baby-jumper; and any convenient number of hoops may be hung successively under the first. The center of the fruit room may be thus occupied; and the walls may be covered by passing horizontal wires around the walls, and about a foot from them, to receive the hooks for the suspension of the bunches.

This will be found much more perfect than the more common practice of keeping grapes upon shelves or in drawers. It is hardly requisite to remind those accustomed to the successful keeping of grapes, of the necessity of careful picking, the removal of imperfect or decayed berries, and of avoiding too much moisture in the fruit room on the one hand, and of such a degree of dryness on the other as to cause wilting. The former may be prevented by chloride of lime, which absorbs moisture rapidly; and the latter by keeping the fruit room (which may be only a few feet square,) *hermetically sealed*—opening the door but once a week to examine the fruit and remove any bad berries. The necessity of excluding frost is of course obvious.

SALT ON WHEAT.—What is the value of salt as a manure for wheat? H.—*Rochester, N. Y.*

If a soil is deficient in soda, common salt (which is a chloride of sodium) will supply it; and in thus supplying an actual deficiency, will be of great benefit. But soils, unless under uncommon management, are never exhausted of soda; for such is the constitution of most soils, and that of most plants grown on them, that phosphoric acid and potash would be exhausted long before soda; and as plants will not grow at all without phosphoric acid and potash, the soil could not be exhausted of soda, unless these elements had been artificially applied *alone*. Salt, then, as an actual fertilizer, we believe will do no good;—in other words, it will do no good as supplying an actual constituent of the plant. It will check *over luxuriousness of growth*, giving a stiffer and brighter straw. Prof. WAY thinks it probable that the good effect of salt, as recorded by some experimenters, is owing to the fact that the double salt of silicate of alumina and ammonia is more soluble in water impregnated with salt, than in common rain water; and that on some soils, therefore, an application of salt will be attended with considerable benefit, by rendering the silicate of ammonia available to the plant; so that an application of salt is equivalent, on that crop, to an artificial supply of ammonia. Further experiments, which are now being instituted, will doubtless throw considerable light on this interesting subject.

SHEEP RACK.—Mr. BAINBRIDGE, of Romulus, wishes to know the best form for making cattle and sheep racks, and by your request, I will give you my plan of a sheep rack. Take a plank 12 feet long, 2 inches thick, and 16 inches wide, and draw a line 4 inches from the edge all around the plank; then space it 3½ inches apart, and with a ¾-inch augur bore your holes 1½ inches deep in the center of the spaces you have made in the line; then make your slats or rounds 15 inches long, and put them in the holes around the plank; then take two more plank 12 feet long, 12 inches wide, and 1½ thick, and bore holes in the lower edge 1½ inches deep, to correspond with the lower holes; then put the plank on the top of the slats; let the slats continue around the end of the rack as the sides; nail the ends to the side. The bottom will be eight inches wide and the top 16 inches; and if you please, you can put a cover on the top of your rack, to prevent the snow and rain getting on your fodder. This will make a rack for 25 sheep. You will see that the line is drawn 4 inches from the edge of the lower plank. This is done in order to form a manger. Take a strip of board 4 inches wide, nail on the edge of the plank all around, and this will form a good feed box. Take two pieces of timber about four inches square, and 3 feet long, pin them to the bottom of the rack about two feet from the ends, frame in the ends of your cross pieces a post 15 inches long to stand on, and so that it can be moved when you wish. J. F. HOPKINS.—*Catharine, N. Y.*

HORTICULTURAL.

(J. J., Galt, C. W.) MAZZARD CHERRY.—Neither of those described is the *Mazzard;* that of which you give a sketch, is the *Prunus padus*, or bird cherry. The *Mazzard* resembles the cultivated heart cherries in both tree and fruit, and is therefore easily distinguished from those you refer to.

BUCKTHORN is quite different from the common thorn found in your forests, belonging to a different genus, (Rhamnus.) We would most decidedly prefer a good Buckthorn or Osage Orange hedge around a ten acre field, putting expense out of the question, to any wooden fence. We lately saw some fine samples of Honey Locust hedge, that convinced us of the practicability of making first rate farm hedges of this plant. The Osage Orange stood the last severe winter here very well in a hedge, and we have little doubt of its entire success.

BOOKS.—*Gray's Genera of the Plants of the United States;* rather an expensive work, but complete, and just what you want, as near as it can be had.

(H. B. C., Alleghany county, Pa.) The wild rose, well managed, will make a good hedge; but an objection to it is, it throws up too many suckers. The seed of this and thorn should be buried a foot deep, or so, in dry, loamy soil, and left there for a year before sowing. They do not generally vegetate the first season.

The Fruit Garden can be sent by mail. Price, $1.25

(J. W. H., Saratoga.) We are not acquainted with what you call "Cape Gooseberry," but may know it by another name Will be glad to see them.

A Fruit and Model Farm and Nursery for Sale.

SAID farm received the premium in 1851, of the Alleghany County Ag. Society. It contains 100 acres of upland, with ten running springs. 800 bu. wheat, 400 bu. oats, one field corn, and 40 tons of hay, are about the product per annum. The orchard contains 2000 bearing fruit trees of 16 years growth, with grapes, strawberries, raspberries, and all kinds of berries, &c.

The buildings cost $5000, five years ago, and consist of a brick house, bank barn, tenant house, two stone milk-houses, with all other out-buildings, &c.

100,000 nursery trees, from one to six years old. 25,000 will be fit to transplant the coming season, and my foreman will superintend it if desired, who has done so for the past five years.

Said farm is situated 4½ miles south from the city of Pittsburgh, on the Washington turnpike road, and will be sold at a bargain, and possession given in thirty days.

Terms—$6,000 in cash; ballance from five to ten years, with interest, secured by bond and mortgage.

Having no sons, and health having failed, and age is coming on, are the reasons I offer my residence at so great a bargain. J. L. SNYDER.

Green Tree, Allegany Co., Pa., Oct., 1851.—10-1t*

Monroe Nursery.

TO those who have purchased trees of me, at the Monroe Nursery, it is unnecessary to say anything here; but the public generally I would recommend to call and examine my stock of trees, for they are, without doubt, the most thrifty and stocky that can be found in any nursery around. It is true, I can not boast of 100,000 of one kind, 100,000 of another, 50,000 of another, &c.; but this I can say, that I have 40,000 fine, thrifty, well grown apple trees, three and four years old, all of the best leading varieties, ready for delivery this fall. Also, cherries, pears, peaches, &c., in like proportion, all of which are offered low, and very low to wholesale jobbers.

My facilities for obtaining buds and scions from bearing trees, are likewise unsurpassed by any other nursery, having, since I have owned and carried on the nursery, (now going on ten years,) set out new standards of all the best leading varieties, all of which are in bearing condition.

CHARLES POWIS.

Greece, Ridge Plank Road, Oct., 1850.

French Zinc Paint.

THIS new and beautiful article of Paint is now offered to the trade and public, ground in prepared linseed oil, for the first time in this country. It has been used successfully in France for the last five years, where it has superseded white Lead as a paint.

The French Zinc when properly prepared and used, makes the most brilliant and durable white in use, and is entirely free from all poisonous qualities.

The French Zinc is not more expensive than white lead, and is prepared in such a manner that it requires no farther preparation for use, than to thin it with Turpentine or raw Oil to the consistency of white lead paint.

The French Zinc is very much whiter, and has a better body, than the New Jersey Zinc.

The French Zinc is offered dry, and prepared as above, in quantities to suit purchasers, at the Manufacturer's Depot, No. 17 Buffalo st., Rochester, N. Y.

July, 1852, M. F. REYNOLDS.

A Novel for the whole Union will be published soon.

NORTHWOOD; or, Life North and South, showing the true character of both: By Mrs. Sarah J. Hale. Illustrated.

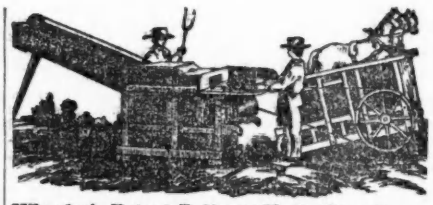
"He who loves not his country can love nothing."

The intention of this deeply interesting novel is to illustrate the dignity of labor, and show the influence of American Institutions on the character of our people both North and South. It is a book for the Nation: nothing partisan or sectional has swayed the mind of the authoress. Mrs. Hale is not tinged by any of the isms of the day, but is above any female writer of our country; a true representative of the moral dignity and grandeur of woman.

F LONG & BROTHER, No. 43 Ann street, N. Y.

This work can not fail to have a large sale, and the trade are therefore requested to send in their orders early.—Bound in cloth, price $1; paper covers, 75 cents.

N. B.—D. M. DEWEY, wholesale and retail agent for Western New York.



Wheeler's Patent Railway Chain Horse Power and Overshot Thresher & Separator.

THE superiority of Wheeler's Patent Railway Chain Horse-Power, and Overshot Thresher and Separator is universally acknowledged. Thousands of them are in use, many of which have threshed from 50,000 to 100,000 bushels of grain, and are still in good condition. Probably more than four times as many of these machines were sold during last year as of any other kind. They are beyond doubt the most durable and economical machine in use. Their capacity has been tested by repeated trials as well at the New York and Pennsylvania Fairs as on several private occasions in competition with another machine made in this city which has been advertised to be far superior to ours, and in every instance the result has been about *one-third* and in some instances more in favor of our machines. In every case except one, where we have submitted our machine to a *working* test at Fairs, it has taken the highest premiums; and in that excepted case the committee decided that our machine performed its work in 8 minutes and its competitor in 11¾ minutes, being nearly one-third in favor of ours.

We have also exhibited ours in competition with the same machine at the State Fairs in Ohio, Michigan, and Pennsylvania, and also at the Provincial Fair in Upper Canada, at all of which we received the highest premiums, viz: In Ohio, a Silver Medal and Diploma; in Michigan, $20; in Pennsylvania, $10; and in Canada, a Diploma.

We have numerous similar testimonials from county Societies, where we have always received the highest premiums awarded to Chain Powers.

Price of One Horse Power, Thresher, Separator, and Belting,.....$120
Two Horse do,..... 145
Price of Double Power, Thresher, and Winnower,.... 225

From R. Olney, of Portage, N. Y.

"Messrs. Wheeler, Melick, & Co.—I will now state some facts in regard to your Thresher and Winnower. We first used it to thresh oats, which were good and not very long straw. With five hands we threshed and cleaned, fit for any market, 60 bushels per hour while running. This is not guess work, as is frequently the case, but we kept the time to the minutes, and much larger figures might have been made had we exerted ourselves. Our wheat was *heavy growth and very long straw.* We averaged 20 to 25 bushels an hour, using a pair of mules and a span of very light horses alternately; but with either team alone, and five hands, I can thresh 400 bushels good oats a day, and half that quantity of wheat, and make it no harder for team or hands than ordinary farm work. The machine is admirably adapted to the farmer's use; can be worked at so little expense and in bad weather when little else can be done. It is of the most simple and durable construction, there being nothing liable to break or soon wear out but that a common farmer can repair. It cleans the grain well and wastes less than any other I ever examined. I write thus minutely that you may understand the facts as they are, the figures I have given being taken from our ordinary threshing without any effort to hurry business."

From Samuel Tucker, of North Evans, N. Y.

"Messrs. Wheeler, Melick, & Co.—In reply to your request about the Thresher and Winnower, I am ready to answer that it works well. Indeed its equal was never seen in Erie county. I have threshed 18,794 bushels of wheat, oats, and barley, besides 50 bushels grass seed. A number of my neighbors want machines like mine."

The subscribers have the exclusive sale of these machines in Rochester, and the general agency for Western New York. We sell at the manufacturers' prices, adding transportation. J. RAPALJE & CO.,

63 and 65 Buffalo street, Rochester, N. Y.

FISHKILL LANDING NURSERY.

TWO AND A HALF MILES NORTH FROM NEWBURGH FERRY.

THE subscriber respectfully solicits the attention of fruit growers and dealers in fruit trees, to his large stock, for sale this fall, consisting of

40,000 APPLE TREES, of the most approved varieties, 6 to 10 feet high, at from $12 to $14 per hundred.

20,000 PEAR TREES, embracing all the varieties in general cultivation, 5 to 8 feet high, 30 cts. each, $28 per hundred, on pear stocks. On quince the trees are very thrifty, and include, in addition to the leading standard sorts, many of the new varieties of recent introduction, which promise well.

30,000 CHERRY TREES, two to three years old, of nearly all the popular kinds in cultivation:—Dwarfs, on Mahaleb stocks, of the choicest varieties, can also be supplied, 6 to 12 feet high, $20 to $22 per hundred.

20,000 PLUM TREES, of the most highly esteemed sorts, $30 per hundred. Trees thrifty, pretty, and of fine size.

A LARGE STOCK OF APRICOT, mostly on Plum stocks, at $30 on plum, $12½ on peach, per hundred.

30,000 PEACH TREES, of the most valuable standard varieties, one to two years' growth on the inoculation, 7 cents each, $6 per hundred. No peach pits are planted but from a district where the "Yellows" has not yet made its appearance.

THE STOCK OF ISABELLA AND CATAWBA GRAPE VINES is very large, two to four years old, with fine roots; having been annually cut back, they are in fine condition for vineyard planting. $10 to $15 per hundred.

2,000 QUINCE TREES, mostly of the Apple variety; Currant and Raspberry bushes, Strawberry plants, Hybrid Perpetual and other Roses, &c.

40,000 DECIDUOUS AND EVERGREEN ORNAMENTAL TREES, suitable for lawns and avenues, many of which are of large size and fine form—among which are 10,000 Arbor vitæ, ½ to 5 feet high, $12 to $25 per hundred. (Not from the State of Maine.)

18,000 BALSAM FIR, ½ to 5 feet high, at from $15 to $30 per hundred—together with Norway Spruce, Native Spruce, Scotch, Austrian, and Weymouth Pines, Junipers, Deodar Cedar, Cedar of Lebanon, English and Irish Yew, &c.

5,000 RED CEDARS, of suitable size for screens.

10,000 Buckthorn, two years old, $6 to $8 per thousand.

The most highly prized varieties of the Apple, Peach, Pear, Plum, Apricot, Cherry, &c., which have recently originated in this country and Europe, have been procured as early as practicable, and tested, or are in the course of being tested, on the grounds of the proprietor. The new and rare Deciduous and Evergreen Ornamental Trees are annually imported, of which fine plants can be furnished. 4,000 seedling Oaks and Elms, imported four years since, are among the Deciduous Trees, many of them very remarkable in their growth and appearance.

The Nursery is located within 2½ miles of the Hudson River Railroad Depot, at Fishkill Landing. Steamboats run daily to New York and Albany, from Newburgh.

Trees, &c., when ordered, will be taken up carefully, correctly labelled, packed in the best manner, forwarded agreeable to order, and with the least possible delay. Charge for packing made only to cover cost.

Catalogues sent in exchange for a letter stamp.

DANIEL BRINCKERHOFF.

Fishkill Landing, October, 1852.—*4

For Sale.

ONE of the desirable farms in the Chenango Valley, situated two miles from the village of Oxford, containg 220 acres, river flat—grain land, pasture, wood land, and orcharding. A large and convenient dwelling house, two large barns, with sheds and out-houses. Watered by the Chenango river, a creek, (on which is a saw-mill,) and by never-failing springs. On it are more than seven hundred rods of stone wall. Persons wishing to purchase, are desired to look at the crops and stock on the farm. Inquire of JOHN TRACY,

Oct., 1852.—10-2t* Oxford, N. Y.

King's Floral Garden and Nursery.

THE proprietor offers for sale, this fall and the coming spring, at his Nursery and Flower Garden, Mount Hope avenue, Rochester, a large and choice variety of Fruit and Ornamental Trees, Shrubs, Vines, Roses, Herbaceous Plants, Bulbous Roots, Greenhouse, Border, and Bedding Plants, Double Dahlias, &c., wholesale and retail.

A few thousand apple stocks, Norway Spruce and Balsam Fir seedlings, Red and White Cedar. The trees are of large size and thrifty growth, and will be sold cheap for cash. WM. KING.

LINNÆAN BOTANIC GARDENS & NURSERIES,

FLUSHING, (LONG ISLAND,) N. Y.

WM. R. PRINCE & CO. desire to sell off by the first of May next, the entire collection of Trees and Shrubbery from 50 acres of their Nurseries, and the Green-house Plants, the ground being wanted for building lots. The trees are equal to any ever grown, and comprise the choicest varieties, and sales amounting to $250 and upwards will be made at 12 months credit for approved security.

The stock of Pears on pear and quince, and of dwarf and standard Cherries, Apples, Plums, Peaches, Grapes, Quinces, and other fruits, is unrivalled in extent and in vigor of growth, and among them are 15,000 Fruit Trees of large bearing size.

50,000 Evergreens of every species and size, and other Ornamental Trees of every size.

3,000 finest Foreign Grapes, in pots, for grape-houses, and 15 superior varieties of hardy Native Grapes.

The collection of Strawberries is the finest in the Union, comprising many varieties not obtainable elsewhere, and all described in the catalogue.

Five best species of European Osiers.

A great stock of Camelias, Chinese Azaleas, and other Green-house Plants.

An immense assortment of Bulbous Flower Roots and Peonies, and the finest collection of Strawberries.

New Nurseries and Cemeteries can buy to great advantage.

NOTE.—This is the proper period for transplanting Strawberries, Bulbous Roots, Peonies, Rhubarb, Asparagus, Sea Kale, &c.

Descriptive catalogues sent to all applicants who send stamps, and a wholesale catalogue for nurseries.

Oct., 1852.—10-1t*2.

Clarke's Excelsior Churn,

OF various forms and sizes, will be furnished to dairymen, throughout the United States, at prices ranging from $2.50 to $10. The sizes generally preferred, with iron axles, crank, and gearing, will be delivered at Utica, for Canal or Railroad, at $7 and $10 each. No extra charge is made for the perfect tempering apparatus which goes with every Excelsior Churn. Three or more thirty gallon milk churns in one frame, for horse power, are offered at about $5 per cylinder. Orders from distant places should enclose payment. Agents wanted to sell state and county rights. Circulars giving full information, terms to agents, &c., will be sent gratuitously to all who apply at any time post-paid, to the proprietor GEO. B. CLARKE,

Lecnardsville, Madison Co., N. Y.

The following is one of the many testimonials of its value:

"Sangerfield, Oneida Co., N. Y., July 25, 1852.

"GEO. B. CLARKE—Sir: The Excelsior Churn now in use in my dairy, does the work in a superior manner, and is just the article to make good butter. I do not care to churn less cream than will produce twenty pounds of butter at a time, which I usually do in from ten to twenty minutes. It is my opinion that your Excelsior Churn has no rival in point of excellence. HEZEKIAH S. GREEN.

Virginia Farms.

THE advertiser offers for sale a plantation of 390 acres in an excellent neighborhood, three to four hours ride from the capital of the State, one mile of railroad, mostly in original growth. Good house with five rooms, out kitchen, &c. Well watered by creeks and never-failing springs. Well adapted for wheat, corn, and oats. A portion valuable low grounds, actually worth $50 per acre. Healthy as any part of the world. Enough wood may be sold from the place to pay for it. Lowest price—$1,600 cash; or $1,000 cash, and interest on the balance.

Also, a place of 1400 acres, thirty miles from the city of Petersburgh, three miles from railroad depot. 500 acres valuable timber, that would fully pay for the place. Suitable for division. Good buildings. A truly valuable plantation. Fine neighborhood. $5 per acre. 2,000 acres may be bought adjoining.

Also a tract of 150 acres, directly on a railroad, 18 miles from the city. $4 per acre—cheap as dirt.

Also, a tract of 453 acres, four miles from the city of Petersburgh, with plenty of marl, buildings somewhat out of repair. $7 per acre.

The above plantations are well worth the attention of northern farmers, and will be sold for the prices stated, and no less. Cash, or part cash and interest added. Address

J. CLARKE, JR.,

10-1t*2 Proctor's Creek, Chesterfield Co., Va.

FRUIT AND ORNAMENTAL TREES.

ELLWANGER & BARRY desire to call the attention of nurserymen, dealers, and planters, to the immense stock of trees now on their grounds, embracing Fruit Trees of every description, viz:

STANDARD APPLES, PEARS, PLUMS, CHERRIES, PEACHES, &c., on free stocks, for orchards, vigorous and well formed.

DWARF AND PYRAMIDAL PEAR TREES, on quince stocks. About 100,000, embracing every fine variety that can be so worked, two year old trees, low branched, vigorous and beautiful.

DWARF AND PYRAMIDAL CHERRIES, on Mahaleb stocks. Fine one, two, and three years old trees, well branched and finely formed.

DWARF APPLE TREES, on Paradise and Doucain stocks. Beautiful two year old trees, with heads, for immediate bearing—besides vigorous yearlings.

GOOSEBERRIES.—Large Lancashire sorts. Strong plants for immediate bearing.

CURRANTS.—Including the *Cherry*, *Victoria*, *White Grape*, and many other new and fine sorts. See our catalogue.

RASPBERRIES.—The new *Large fruited Monthly*, *Fastolf*, &c., &c. A complete collection of all desirable varieties.

GRAPES.—Hardy, native sorts—*Isabella*, *Catawba*, *Clinton*, &c.—strong two and three year old vines. Thirty varieties of Foreign Grapes, for vineries—strong, thrifty plants, in pots.

STRAWBERRIES of all desirable varieties, and all other fruits cultivated.

RHUBARB.—Genuine *Myatt's Victoria*, *Myatt's Linæus*, *Mitchell's Royal Albert*, *Downing's Colossal*, and hybrids of the above, of our own raising from seed, quite equal to any of them.

The entire fruit department is under our own personal supervision. The best quality of stocks is used, and the most scrupulous attention given to ensure accuracy. We flatter ourselves that no nursery collection can offer a stronger guarantee to purchasers, in this respect. The stock is all grown on new, fresh soil, and is healthy, well matured, and hardy. We ask purchasers to examine it.

ORNAMENTAL.—Large trees, for streets, parks, &c., such as *Horse Chestnuts*, *Silver Maples*, *Sugar Maples*, *Snowy Abeles*, *Mountain Ash*, *Elms*, and *Tulip Trees*, in large quantities, cheap.

RARE ORNAMENTAL LAWN TREES—embracing the most novel, remarkable, and beautiful trees and shrubs, both deciduous and evergreen, that can be grown in our climate. For particulars we must refer to the descriptive catalogue.

ROSES.—One of the richest collections in the country, including the newest and best European varieties, selected by us in person, last summer.

BULBOUS ROOTS—imported annually from Holland.

DAHLIAS.—The new English and French prize sorts of 1851, besides fine older ones.

All articles packed in the best manner, and forwarded to any part of the United States, Canada, or California.

Orders strictly complied with in every particular.

The following catalogues are sent *gratis* to all who apply and enclose stamps to cover postage, which must be prepaid:

No. 1. A Descriptive Catalogue of Fruits.

No. 2. A Descriptive Catalogue of Ornamental Trees, Shrubs, &c.

No. 3. A Catalogue of Dahlias, Fuchsias, Chrysanthemums, and bedding plants.

No. 4. A Wholesale Catalogue, for nurserymen and others who wish to purchase largely.

Postage on Nos. 1 and 2—500 miles or under, 3 cts.; 500 to 1500 miles, 6 cts. Postage on Nos. 3 and 4—500 miles or under, 1 cent; 500 to 1500 miles, 2 cts.

Mount Hope Nurseries, Rochester, N. Y., Sept., 1852.

Emery & Co.'s Improved Horse Powers, Threshers, and Seperators.

THE undersigned have been appointed sole agents for the sale of Emery's new Patent Improved Horse-Powers, Threshers, and Separators, in the city of New York. The State Agricultural Warehouse is the only depot where this superior Power can be had.

LONGETT & GRIFFING,
7-tf. State Ag. Warehouse, 25 Cliff st., New York.

Seigner & Shipton's Grain Drill.

THIS is a new Drill, recently patented, combining more good qualities than any other drill now in use. These drills are manufactured and sold by J. RAPALJE & CO., Genesee Seed Store and Agricultural Warehouse, Nos. 63 and 65 Buffalo street, Rochester, N. Y.

SYRACUSE NURSERIES.

THORP, SMITH, HANCHETT, & CO., PROPRIETORS.
SYRACUSE, N. Y.

OUR nursery grounds, among the largest and most extensive in the country, are now covered with a most beautiful stock of Fruit and Ornamental Trees, Shrubbery, Roses, Green-house Plants, &c. We therefore invite particular attention to our stock of trees, which can not be excelled in size, thriftiness, and beauty, by those of any other establishment in the Union. Nurserymen, Amateurs, Orchardists, and Venders, are earnestly invited to call, examine, and judge for themselves.

APPLES.—We have a very extensive assortment of all the very best varieties in cultivation, both Dwarf and Standard.

PEARS.—Our stock of Standards and Dwarfs is much better than heretofore; and we invite competition, as none finer can be produced. We have also a few dwarfs five years old, filled with fruit spurs, and which have borne freely the past two years. (and now with a full crop,) that we will supply to those persons desiring fine fruit-bearing trees.

CHERRIES—Both Standard ahd Dwarf, of all the newest and finest sorts, which can not be excelled for beauty and thriftiness.

PLUMS, PEACHES, APRICOTS, NECTARINES, CURRANTS, (including the *Victoria* and *Cherry*,) and ENGLISH GOOSEBERRIES, of all the best leading sorts.

Our ORNAMENTAL TREES are of fine form and luxuriant growth, and require only to be seen to be admired.

EVERGREENS.—A fine assortment of *Norway* and *Balsam Firs*, *Spruces*, &c.

PŒONIES.—A splendid assortment of both tree and herbaceous varieties.

DAHLIAS.—Over 150 choice selected kinds, at 25 cents for whole roots.

ROSES.—One of the largest stocks in the country, of all the leading varieties, being about 10,000 plants.

BULBOUS ROOTS.—A splendid assortment, just imported from Holland, of best double *Hyacinths*, *Tulips*, *Crocus*, &c., &c.

GREEN-HOUSE PLANTS.—A large collection of the choicest and newest kinds, including the new *Heliotropes Reptans*, &c., *Lantana Ewingii*, *Hoyas*, *Imperialis*, *Bella*, *Bidwelliana*, &c.

FUCHSIAS in 50 varieties, including *Spectabilis*, *Elisa Millies*, *Sir John Fastolf*, *Serratifolia*, *Prince of Orange*, *Carolina*, *Pearl of England*, &c.

CHRYSANTHEMUMS.—A full assortment of all the best standard kinds in the country. Of the *New Dwarf and Daisy* varieties we have everything new and rare, including 30 of the very best sorts.

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STRAWBERRIES.—All the best varieties, including the 3 new Cincinnati sorts, one of which took the $100 premium.

HEDGE PLANTS.—*Buck Thorn*, *Privet*, *Red Cedar*, and *Osage Orange*.

SEEDLING STOCKS.—Nurserymen and others can be supplied with Apple, Pear, French Quince, Mahaleb, Doucain, and Paradise stocks, by giving us notice in due time.

Our Catalogues, with full descriptions and prices, will be forwarded to every post-paid applicant enclosing one letter stamp, if under 500 miles, and three stamps if over that distance.—9-2t. THORP, SMITH, HANCHETT, & CO.

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NOW offer to furnish nursery stock generally, of as good quality, and at as low rates, as can be obtained elsewhere.

FRUITS of all the leading varieties, both standard and dwarf, of Apples, Cherry, Peach, Pear, Plum, &c., &c. Gooseberries, Currants, Raspberries, Strawberries, &c. Grapes—*Isabella*, *Catawba*, *Clinton*, &c.

Also 100,000 apple stocks, for root grafting. 20,000 Cherry stocks, root pruned.

All orders accompanied with cash or satisfactory reference, and all letters of inquiry post-paid, will receive prompt attention.

From the connection of Mr. Sheppard for a number of years with the following establishments, all of which sustain the highest reputation, viz: A. J. Downing and A. Saul, Newburgh, N. Y.; Wm. Reid, Elizabethtown, N. J.; and Ellwanger & Barry, Rochester, N. Y.; the proprietors flatter themselves that their knowledge of the great variety of tastes and wants of planters generally, will enable them to guarantee ample satisfaction to all favoring them with their patronage.—9-2t.

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PROPRIETORS OF THE ROCHESTER AND CHARLOTTE PLANK-ROAD NURSERIES,

Rochester, N. Y.,

OFFER for sale, as follows, at moderate prices:

10,000 Apple trees, from five to eight feet high, four years old. All the principal early and late sorts. Also, Pear, Peach, Plum, and Cherry trees—all thrifty and in good order for transplanting.

20,000 Raspberries, including all the popular market varieties.

5,000 Isabella Grape vines, three years old, propagated from cuttings, not from layers—will bear fruit at once.

1,500 Apricot trees—large and thrifty—full of fruit buds.

50,000 Cherry seedlings, (Black Mazzard,) in fine order. They will all bud next year.

25 distinct varieties of Strawberries, among them the principal productive and high flavored sorts.

10,000 Rhubarb Roots. Downing's Collossal, Giant, and Myatt's Victoria.

100,000 Giant Asparagus roots, two and three years old.—Every family ought to have a bed of this delicious vegetable of the easiest culture.

Sea Kale and Horse Radish.

Hedge Plants, such as Privet, Osage Orange, and Buckthorn, one and two years old.

Our Ornamental trees are straight and handsome. All the most desirable varieties under cultivation.

Shrubs, Running and Shrubby Roses, Ornamental Vines, &c., &c., cultivated largely, and will be sold low.

☞ Our nursery land is principally a mellow, sandy loam, which furnishes our trees with tufts of fibres, and gives them a decided advantage over trees cultivated in stiff clay or wet land, which generally produces long, bare roots, without fibres.

All orders addressed to us, as above, will be promptly attended to.

See our General Descriptive and Annual Catalogues, which will be sent gratis to all post paid applicants.

☞ The extensive pear, peach, cherry, and apple orchards connected with these nurseries, give them facilities which are seldom equalled in the propagation of nursery stock. All our scions and buds are cut from bearing trees; and if there is a possibility of having fruit trees accurate to name and description, we have every facility for doing so.

September, 1852.—9-2t.

Hallock's Agricultural Warehouse,

No. 50. STATE ST., ROCHESTER, N. Y.

THE Subscriber, late from the Agricultural Works, Warehouse, and Seed Store of Messrs. Emery & Co., Albany, (where he has been engaged for the past six years,) has been induced to establish an Agency for the sale of their justly celebrated Premium Horse Powers, Threshers, Separators, &c., in Rochester. Particular attention will be paid to selling and putting up the Horse Powers, and other fixtures for threshing, &c. A thorough knowledge of these machines enables him to put them up more satisfactorily than has been done heretofore. Price and terms same as at Albany, transportation added.

He will keep for sale, Emery's Seed Planters, the best in use; Circular and Cross Cut Saw Mills, Feed Mills, Corn Stalk and Hay Cutters, Corn Shellers, Churning fixtures, &c., adapted to the Power.

Also, Reapers, Mowing Machines, Grain Drills, Plows, Harrows, Cultivators, Corn Shellers, Hay Cutters, Fan Mills, and agricultural and horticultural implements generally. He will be prepared to furnish dealers with Dunn and Taylor's well known Scythes; also, Manure, Straw, and Hay Forks, Snaths, Rifles, and other haying tools, at manufacturers' prices, wholesale and retail.

Particular attention is called to A NEW PLOW, which is believed to be the best cast-iron Plow ever offered, and which is warranted to do better work, with less expense of team than any plow heretofore sold in Rochester, while the price is less than for any other equally well finished.

The "uniform one-price, cash system" will be adopted, with the prices as low as the cost of articles and just compensation for labor and time will allow. Farmers and others are invited to call and examine the stock of Machines and Implements,—and are assured no effort shall be wanting to meet promptly the wants of a discriminating public. E. D. HALLOCK.

July, 1852.

Northern N. Y. Live Stock Insurance Company, Plattsburgh, N. Y. For terms, please apply to agents of the Company.

Great Sale of Superior Thorough-bred Short-Horn Cattle.

THE subscriber will offer for sale his entire herd of choice Short-Horns, comprising 50 head, young and old, at public auction, on Wednesday, the 13th of October, 1852, at 1 o'clock P. M., at his farm, 2½ miles from the city of Troy; reserving to himself one bid on 5 cows and heifers and one bull, say six head in all, and these to be pointed out previous to the commencement of the sale. This bid will be made public when the six animals are brought to the stand for sale. Should any gentlemen advance on the single bid made by the proprietor, the highest bidder will be entitled to the animal. It is proper to say, the severe drouth in this vicinity reducing the hay crop one half, has decided the proprietor to make this sale at the time named, instead of next June, which he had purposed to do.

The well established reputation of this herd in this Union, and in Canada, and the splendid herd it has measurably sprung from, viz: the famed herd of that eminent English breeder, the late Thomas Bates, Esq., renders it hardly necessary to comment upon its superior merits. It may not however be inappropriate to remark, that the establishment of this herd was commenced in 1838, and that the most careful attention has since been paid to its breeding, and that it now contains mostly all the reserved stock of two former public sales. Since 1840, the proprietor has imported from the late Mr. Bates, and his friends and late tenants the Messrs. Bell's, 7 head of Short-Horns. And besides these, he has now on the passage across the Atlantic, shipped 21st June, on board the packet ship Kossuth, Capt. Jas. B. Bell, a superior yearling roan bull, having many crosses of the famed Duchess bulls of Mr. Bates. Including this latter animal and the two beautiful red roan 3 year old heifers which came out from England last September, "Yarm Lass" and "Yorkshire Countess" and the beautiful heifer calf of the latter animal, got in England by the Duchess bull "5th Duke of York," there will be 14 head of this imported stock, and its immediate descendents. There has been sold from this herd but 3 heifers from these importations, and these cows were sold at $300 each. All the young bulls bred from these cows, except those now offered for sale, have also been sold at private sale, at $300 each, most of them while quite young.

Besides these 14 head of high bred animals, the noble premium cow "Esterville 3d," bred by E. P. Prentice, Esq., of Albany, and her equally fine 2 year old, red and white heifer bred by me, got by the Bates bull "Meteor," and 8 of the famed milking Willey tribe, the same tribe of cows as the heifer "Ruby," sold by me to Mr. S. P. Chapman, of Madison county, and which cow was awarded the first premium by the N. Y. State Ag. Society, for producing the largest quantity of butter in ten days in June and ten days in August, on grass pasture only, being a fraction over 40 lbs. in those 20 days. There are other valuable tribes in the herd, as the printed catalogue will show.

The catalogue will be ready for distribution about the 1st of August, and will exhibit richness of pedigrees rarely to be met with, showing the descent of the most of the animals from the best animals on record in the English herd book. Having received an invitation from H. Strafford, last winter, to forward a list of the pedigrees of my herd, to be inserted in the forthcoming volumes of the English herd book of which Mr. Strafford is now the editor, several pedigrees were sent to him of the animals here offered for sale, and will appear in said book. Gentlemen are invited to examine the herd at any time.

A credit of 9 months will be given on all sums up to $300, and 9 and 18 months on all sums over $300, for approved paper, with interest, payable at some bank in this State.

Troy, N. Y., August, 1852.—8-3t. GEO. VAIL.

Prices of Manures.

Peruvian Guano, 2¼ to 2½ cts. per lb.

Improved Superphosphate of Lime, (Mapes,) 2½ cts. per pound.

Superphosphate of Lime, (Extra No. 1, Duburgh's,) 2½ cts. per lb.

Bone dust, when taken in equal quantities, $2.25 per bbl.

Bone sawings, separately, $2,50 per bbl.

Wood's Renovating Salts, 1 cent per lb.

Sugar-House Bone Black, $3 per hhd.

Potash, 3½ to 4 cts. per lb.

Charcoal, pulverized, $1 per bbl.

Sulphuric acid, 2½ to 2½ cts. per lb.

Plaster of Paris, $1 to $1.25 per bbl.

For sale at the State Agricultural Warehouse, No. 25 Cliff street, New York. LONGETT & GRIFFING.

September, 1852.—9-2t.

Prices of Agricultural Products at the Principal Markets in the United States.—Sept. 20, 1852.

	New York.	Boston.	Rochester.	Chicago.	Cincinnati.	Philadelphia.
Beef, per 100 lbs.	$7.00 a 9.00	a $7.25	$5.50 a 6.00	$6.00 a 6.50		
do mess, per bbl.	12.00 16.00	15.00 17.00	10.00 10.50	8.00 10.00		$18.00 a 19.00
Pork, per 100 lbs.			7.00 7.50	5.00		
do mess, per bbl.	19.00 19.12½	20.00 21.00	16.00 19.00	17.00 19.00	$19.25 19.50	19.75 20.00
Lard, per lb.	11½	12 13	9 10	9 10	10 a 11½	11½ 12½
Butter, do	14½ 22½	16 21	16 18	10 12½	11 16	12 14
Cheese, do	6 6¾	4 7	6 7	5 8	6 6½	
Flour, per bbl.	4.25 5.75	4.12 5.75	4.50 4.75	3.50 4.25	3.30 3.60	4.50 4.87½
Wheat, per bush.	90 1.11	90 1.05	96 98	45 53	57 60	95 1.06
Corn, shelled, per bu.	70 72	70 74	54 56	46 48½	40 42	70½
Rye, do	86	78 80	56 62		48 53	74
Oats, do	43	46 47	34 37	26 28	23 25	34 37
Barley, do	74 78		67 70		40 50	
Clover seed, do	8a8¼ pr. lb.	8 a 11 per lb.	5.50		4.00 5.00	4.75 5.00
Timothy seed, do	$18 to 20 per tce.	3.00 3.25	2.50 2.63	2.25	1.75 2.00	2.75 3.25
Flax seed, do	1.45 1.50	1.33 1.50	1.25 1.50	1.00	90	
Hay, per ton	20.00 25.00	20.00 21.00	11.00 13.00		5.00 10.50	
Wool, per lb	35 52	40 50	30 40	23 36	28 45	37½ 60
Wood, hard, per cord		5.00 6.00	4.00 4.50	4.00		

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OFFERS for sale at his nursery on North Union street, a large stock of Fruit Trees, consisting of Apples, Pears, Plums, Cherries, Peaches, and Apricots, of the most desirable varieties.

Currants, Gooseberries, Strawberries, and Grapes, of various kinds.

Also, a fine assortment of dwarf pears.

20,000 seedling apples, for stocks.

Rochester, October, 1852.—10-1t*

S. MOULSON.

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20,000 Northern Spy apple trees, 6 to 8 feet high, (*transplanted,*) at 37½ cents each, or $25 per hundred.

50,000 most popular varieties of apple, at 25 cents each, or $18 per hundred.

1,000 dwarf apple, at 37½ cents each.

60,000 dwarf pear, at 50 cents each.

20,000 standard pear, at 50 cents each.

20,000 standard and dwarf cherry, at 50 cents each.

10,000 Giant rhubarb, at 25 cents each, $2 per dozen, or $60 per thousand. Best sort for market gardeners.

Also, a large assortment of apricot, peach, nectarine, strawberries, various sorts of nuts, &c., &c.

50,000 Osage Orange, for hedges, at $10 per thousand, or $6 for five hundred. Hedge plants in great variety.

50,000 Norway Spruce, two years old, at $5 per hundred.

20,000 " three " at $10 to $12 "

20,000 Mountain Ash, two years old seedlings, at $20 per thousand, or $12 for 500.

Bulbous flower roots of various sorts, together with a large assortment of various hardy items, comprising everything requisite for open ground culture in this climate.

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VOLUME XIII, FOR 1852.

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